

Ford Transit '06

Dual rear wheels

with VB-FullAir™ for the rear axle



Fitting instructions

For kit nr: 10506122XX





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This air suspension kit has been carefully developed especially for this vehicle. The air suspension should fit perfectly on a standard vehicle, not equipped with any optional after market parts. However, whenever a problem occurs, please contact your air suspension supplier.

This manual has been carefully crafted to provide the best way to fit the air suspension. However, the manual is a random indication of the technical specifications at any given time. VB-Airsuspension reserves the right to make technical changes in the air suspension kit without any notification.

Always place the vehicle onto a car-lift when working on it. Make sure the rear wheels are always supported. Make sure the vehicle is correctly secured when fitting the air-suspension.

When fitting the wiring VB-Airsuspension advises to disconnect the battery-terminal clamps. Please check your vehicle workshop manual if this conflicts with any electronic vehicle management equipment. Make sure that the new wiring doesn't conflict with the original vehicle wiring and electronics.

When fitting the air-suspension, make sure no parts are being damaged.

The air-suspension is designed to support the manufacturer's Gross Vehicle Weight Rating (GVWR). Never overload the vehicle, as it may result in damage to the air-suspension or vehicle. The vehicle should be weighed when it is fully loaded and in a level condition. This is to determine if the manufacturer's recommended GVWR is exceeded.

If the air-suspension fails, stop the vehicle and don't drive with it. Only in an emergency the vehicle can be driven at low speed and with precautionary measures.

Directives for assembly of rear-axle air-suspension

Fitting of the air suspension kit can only be done in a from VB-Airsuspension authorised workshop, equipped with all appropriate equipment and tools, by an authorised mechanic with proper training and experience in the following fields (all in the range of light commercial vehicles):

- Mechanics
- Electronics
- Pneumatics

Before dismounting safety components (seats, base of seat, seat-belts, airbag, etc.) on the vehicle, please disconnect every part from the battery of the vehicle. For the electric re-assembly and reconnection please refer to the repair manuals of the vehicle.

When fitting the air-pipes and wiring make sure that they don't bent to much. Always cut the air-pipes in a right angle. Make sure that the air-pipes are clean on the inside. Connecting electrical cables or air-pipes to brake hoses is strictly prohibited!

The use of scotch connectors or clamped couplings (for rapid connection) is prohibited. Recommendation: Solder connections, using sleeves and connectors of automotive quality. After soldering use a shrink-sleeve for isolation, preferably a glued shrink-sleeve.

All electrical cables must be kept at least 100 mm away from the ABS/ESP block, its sensors and other controllers. The passage of cables and pipes near the exhaust must be avoided. The minimum distance between exhaust and the cables/pipes without protection measures must be 200 mm.

For the passage of cables (with or without conduit) through a metal sheet you must protect the cables with either a grommet around the hole, or extra protection around the cables. If conduit wire is used do not feed it into the fuse-box of the vehicle.

Connecting cables with metal clamps to painted metal or galvanised parts is prohibited. (It is authorized on aluminium and stainless steel). Secure all connectors properly and make sure that there is no stress on them.

All main electrical connections after the fuse of the battery are prohibited. The main electric connections must be taken directly on the terminal + of the battery (before the fuse). The fuse must be rated according to the diameter and use of the wire and must be marked and clearly recognizable, so that it is clear that this fuse belongs to the airsuspension and not to another part of the vehicle. It has not been permitted to use more than 2 crimp terminals directly on one battery pole. For making several connections on one battery pole you must use battery distributor plates.

Whenever changes are made to the original corrosion protection, restore it immediately. For this purpose use for example paint or spray wax. Attention: do not apply corrosion inhibitor to non metal parts! For all fastens covered by anti-corrosion sealant (under chassis protection), the sealant/coating must first be removed. Add an anti-corrosive layer to any bare metal, then re-fix with the correct coupling. The whole area must then be re-sealed/re-coated.

For all parts of the vehicle dismounted by the body-builder, it is obligatory to carry out (during re-assembly) a tightening of these parts to the recommended torque setting (see the repair manual of the vehicle that you will modify). This re-assembly must be integrated in the control sheet of the body-builder (point of safety) and is the responsibility of the body-builder.

Remarks:

- Do not use a lock nut with nylon;
- If the original lock nut on the vehicle is a lock nut with nylon, please replace the lock nut with a new lock nut with nylon.

When the vehicle is in it's ride-height, tighten all the bolts and nuts to the final torque. Whenever a torque mentioned in this manual conflicts with the torque recommended by the vehicle manufacturer always use the one recommended by the vehicle manufacturer.



Check the alignment of the rear-axle when the vehicle is in ride-height. Measure the distance between the inside of the rim and the chassis on both sides. A maximum difference of 3 mm is allowed.

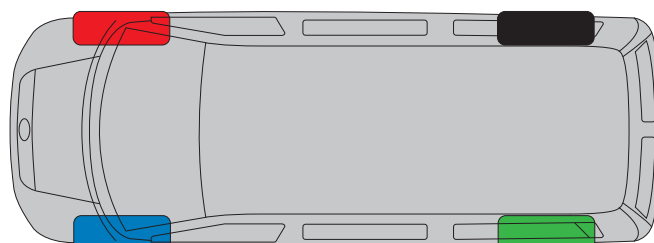
The Body-builder or adaptation company must make sure that its adaptation does not hinder or prevent the future maintenance or repair of the airsuspension.

In the case of any conflicts, in any of the points mentioned above, please contact your air suspension supplier for technical assistance.

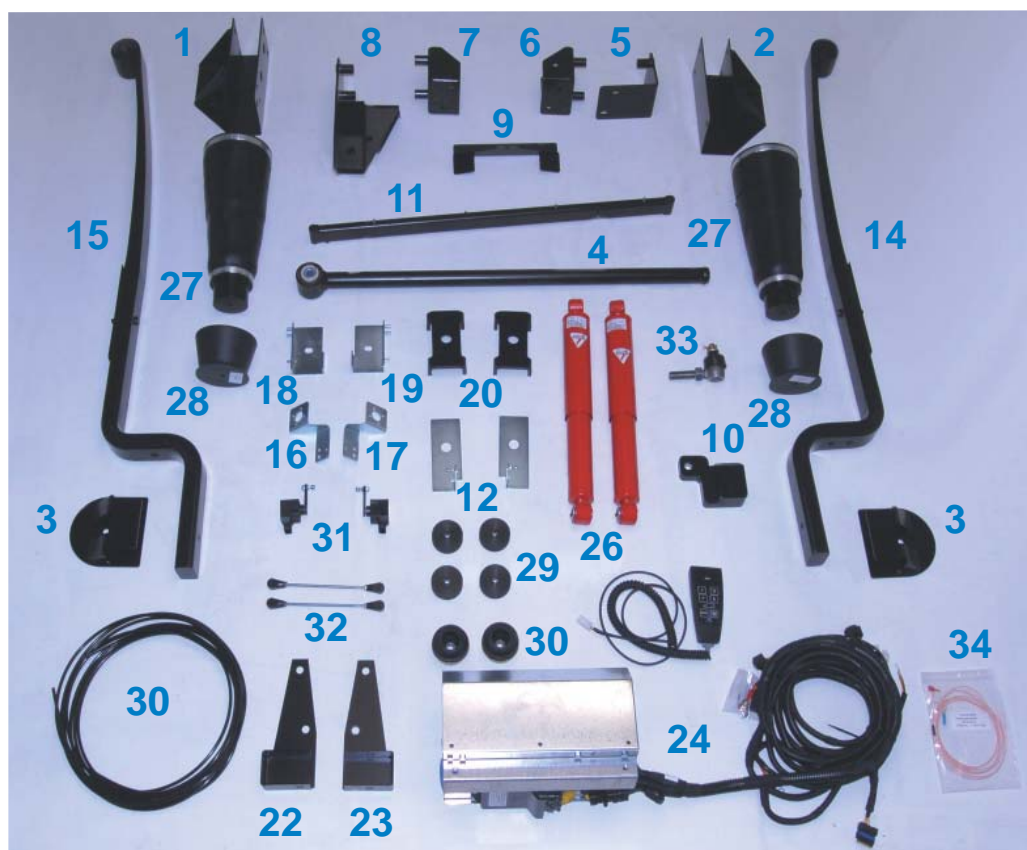
Contents

1 OVERVIEW OF THE AIR-SUSPENSION KIT	5
2 FITTING OF THE AIR-SUSPENSION KIT	6
2.1 PREPARATIONS	6
2.2 FITTING OF THE MAIN SPRINGS	8
2.3 MOUNTING SUPPORTS	9
2.4 FITTING OF THE AIR-SPRINGS	12
2.5 THE PANHARD-ROD	13
2.6 THE SHOCK-ABSORBERS	15
2.7 THE BUMPSTOPS AND HEIGHTSENSORS	16
2.8 FITTING OF THE COMPRESSOR	17
2.9 FITTING OF THE AIR-TUBES	18
2.10 FITTING OF THE WIRING HARNESS	18
2.11 IN THE CAB	20
2.11.1 The handbrake signal	21
2.11.2 The ignition feed	22
2.12 CALIBRATING	24
2.13 COMPLETION	25
3 CHECKLIST	26
4 TORQUE RECOMMENDATIONS	27
5 EXPLODED VIEW	28
6 WIRING DIAGRAM	38

Colour	Description
	Left Rear
	Right Rear



1 Overview of the air-suspension kit



The Air-suspension kit consists of numerous different parts. To keep things clear, only the main parts have been included on the above picture. The more common parts, like for example the fitting materials, have been left out.

Number	Description	Number	Description
1 + 2	Air spring support	20	Centre plate main spring
3	Bottom mounting plate	22	Compressor support rear
4	Panhard rod	23	Compressor support front
5	Mounting support reaction arm	24	Compressor+ASCU+wiring harness
6	Reaction arm support	26	Shock absorber
7	Mounting plate panhard support	27	Air spring
8	Panhard rod support chassis	28	Piston
9	Spare tire support	29	Filling block bump-stop
10	Panhard rod support main spring	30	Bump-stop
11	Reaction arm	31	Heightsensor
12	Ball-joint support	32	Heightsensor rod
14 + 15	Main spring	33	Panhard rod ball-joint
16 + 17	Heightsensor support	34	Feed wire
18 + 19	Mounting support bump-stop+HS		

Please check the 'exploded view' starting at p.28 in the annex for a more detailed view of the parts. Here you can also find the part numbers.

2 Fitting of the air-suspension kit

2.1 Preparations

Start with removing the original shock absorbers. To do so, remove the highlighted bolts at both sides of the vehicle.

Attention: Do not discard of the original bolts as they are to be reused.

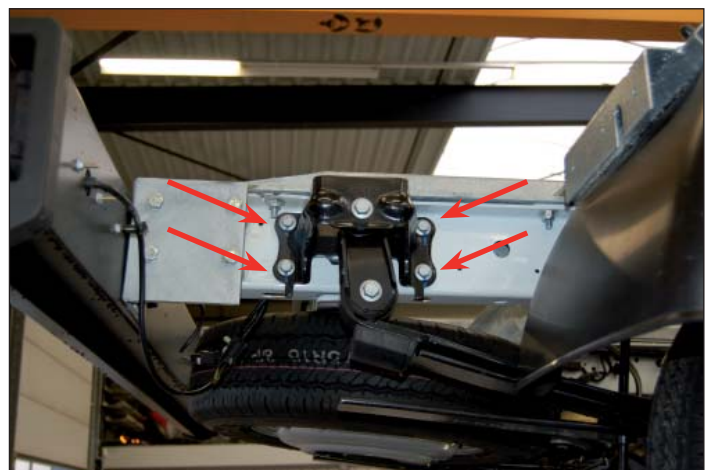
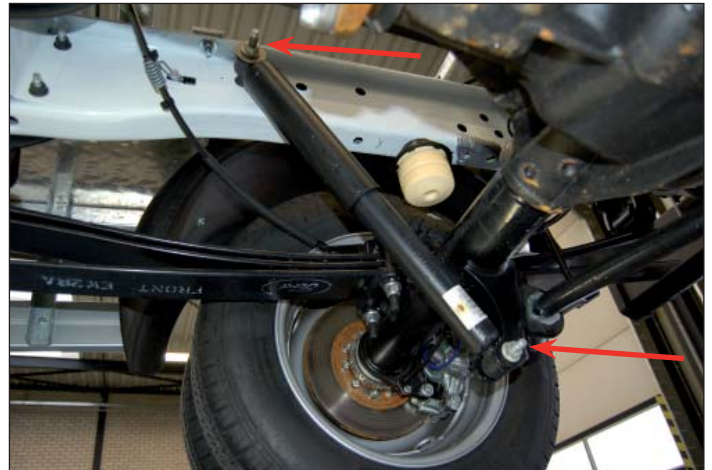
Attention: Always secure the rear axle to prevent tension in the parts. Tension can induce unexpected behaviour and result in damage or even injuries!

Also remove the spare tire on the usual way.

Next, remove the winch of the spare tire. To do so, remove the highlighted bolts. Only remove these bolts, later in this manual, the support is fitted back

Attention: Do not discard of the original bolts as they are to be reused.

Now, remove the original leaf springs. Also remove the rear leaf-spring bracket. Start with loosen the U-bolts. Next remove the bolts of the rear leaf-spring bracket.



Finally the front bolt can be loosened of both leaf springs. Now remove the leaf springs.

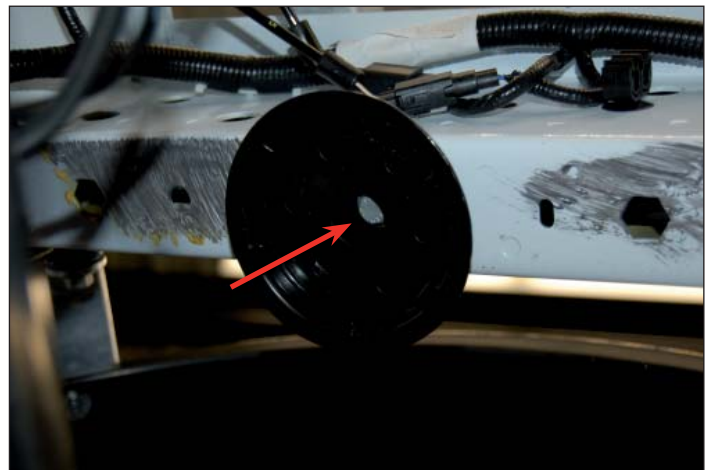
Tip: To prevent the rear axle from moving, first replace one leaf-spring for a main spring (§ 2.2) and then do the other side!

Tip: Lower the rear axle a little to make this easier.

The next step is removing the original bump-stops. Firstly pull the rubber out the bracket, as showed on the picture.



Next, remove the support.



2.2 Fitting of the main springs

The first step is to fit the new main springs. Use the original bolts to secure the main spring to the front spring bracket.

Torque: 125 Nm

**** Do not tighten these bolts yet, *Check* the vehicle has to be set in driving height first!**



Attention: Make sure the centre-bolt slides into the hole in the rear axle! The main spring with the two holes for the panhard rod should be at the right side!

Now lay the plates with the welded ball-joints onto both main springs. Make sure the hole in the plates is over the centre bolt. The ball-joint itself is not in the middle of the plate and should be at the **rear** of the vehicle. Please see the picture for a better view. The ball-joint is pointing to the **outer side** of the vehicle. Now lay the centre plate over the ball-joint support, as you can see in the inlay picture.

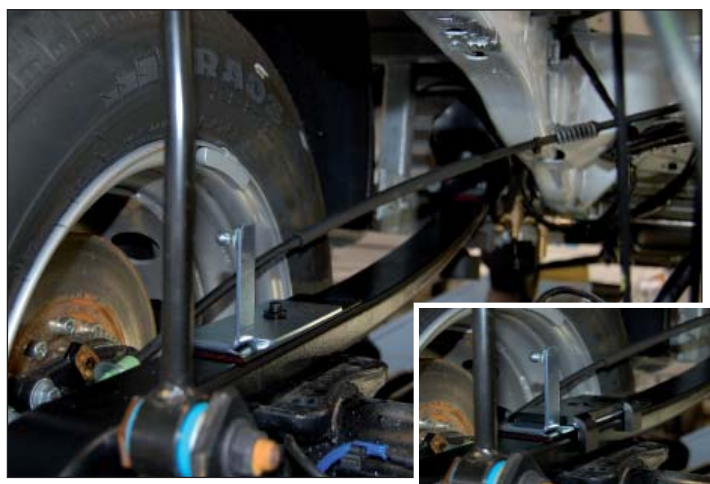
Now lay the original plate over the centre plate, and use the original U-bolts to secure the main spring to the axle. Use anti-seize compound to secure the nuts to the U-bolts.

Torque: 175 Nm

**** Do not tighten these bolts yet!**



Check



2.3 Mounting supports

Start with sliding the filler bush into the indicated hole in the chassis. Do not drop them in the chassis! Slide them through the chassis. See inlay picture for result.

In order to be able to fit the supports, it might be necessary **for a van** to remove some of the under-chassis protective wax (at **both** sides of the vehicle). This is not necessary for chassis-cab vehicles.

Attention: Protect the surface with an anti-corrosion substance as for example underbody coating or spray-wax!

Next, fit the spring supports to the chassis. Use the original rear leaf spring bracket bolts to secure them. Pay attention to the difference between the left and right support. The supports are pointing to the outer side of the vehicle. The support showed on the large picture is the right side. Fit the left support in the same way, see the inlay picture.

Torque: 74 Nm



Check



Now fit the winch back in place. Use the original bolts to secure them, see picture.

Torque: 20.5 Nm



Check

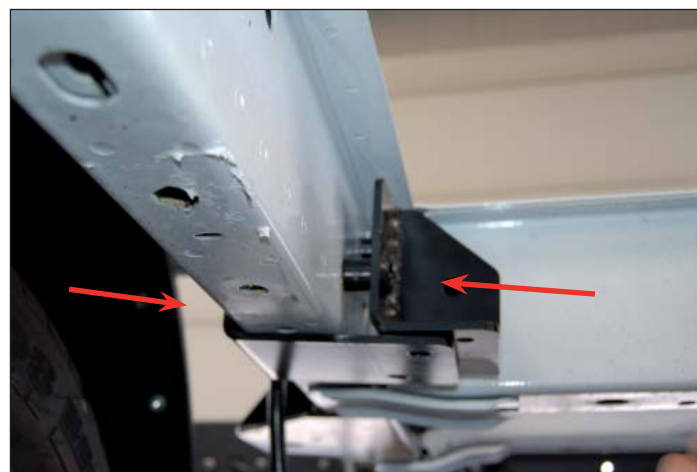


Next, fit the reaction-arm supports to the chassis. Also here counts, it might be necessary to remove some of the under-chassis protective wax.

Start with sliding the right support into the chassis.

Next slide the left support from the inner side of the chassis to the right support.

Attention: Protect the surface with an anti-corrosion substance as for example underbody coating or spray-wax!



Secure these two parts to the chassis. Use Bolts, washers and nuts as showed in the picture.

2x M12 x 110 Bolt
4x M12 Washer
2x M12 Locking nut
Torque: 104 Nm



Check

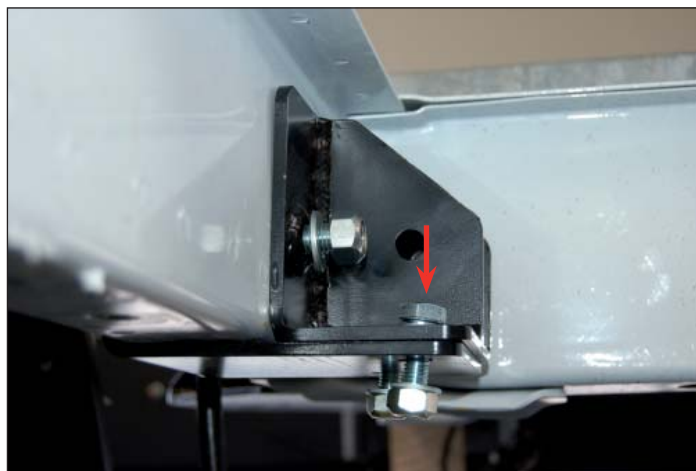


Next, secure the two parts to each other as showed in the picture.

2x M10 x 30 Bolt
4x M10 Washer
2x M10 Locking nut
Torque: 60 Nm



Check

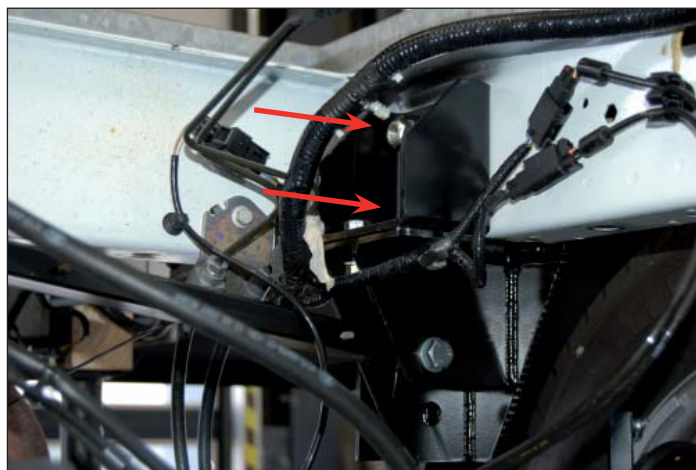


On the left side of the vehicle, the panhard support has to be fitted. This works in the same way as the previous supports. Firstly put the outer side support in place. Next, slide the inner side support against it. If necessary, put the original wiring harness sideways.

2x M12 x 110 Bolt
4x M12 Washer
2x M12 Locking nut
Torque: 104 Nm



Check

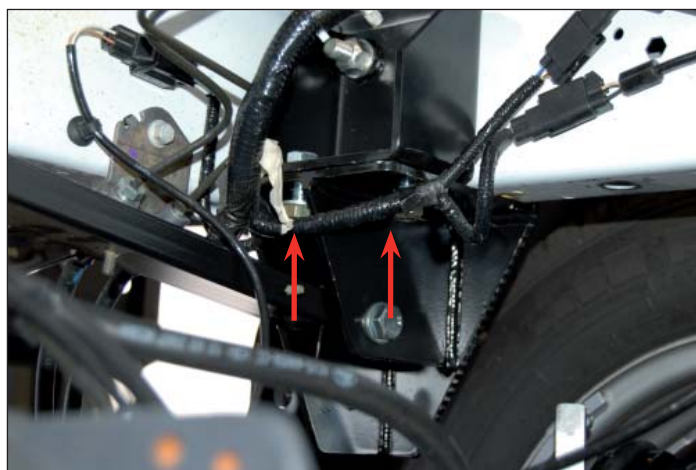


Secure the parts together using the bolts, washers and nuts below.

2x M10 x 30 Bolt
4x M10 Washer
2x M10 Locking nut
Torque: 60 Nm



Check



Fit the reaction arm in the supports and secure it. The pins on the small side of the arm must pointing to the front of the vehicle. The pin on the broad side of the arm is pointing down (left side).

2x M12 x 80 Bolt
4x M12 Washer
2x M12 Locking nut
Torque: 104 Nm



Check



Next, remove the original spare tire support (see inlay picture). Fit in the same place the new support. Use the original bolt to secure it.

Torque: 20,5 Nm



Check



2.4 Fitting of the air-springs

firstly fit the under plates to the main spring. The plates are on the upper side on the spring, pointing to the inner side of the vehicle. Slide the plate on the main spring. On both sides a plate has to be fitted.

2x M10 x 60 Countersunk bolt
2x M10 Washer
2x M10 Locking nut
Torque: 60 Nm



Check



Next, fit the air-connections on the air springs.



Now fit the air-springs on the supports as showed in the picture. Use the English bolts to secure them.

4x UNC 3/8 x 5/8" Bolt
4x M10 Washer
Torque: 43 Nm



Check

**** Do not tighten these bolts yet!**



Pull the plug on the underside of the air spring down. Slide the piston over the plug of the air-spring at both sides of the vehicle. Secure it by screwing through the bottom of the mounting plate into the bottom of the air spring.

2x UNC 3/8 x 1½" Bolt
2x M10 Washer
Torque: 20 Nm



Check

**** Do not tighten these bolts yet!**



2.5 The panhard-rod

Fit the panhard rod support to the right hand main spring. The support is not symmetrical! The hole for fitting the rod, is even with one side of the support. This side has to be pointed to the front of the vehicle. See the picture in the next step for a better view.

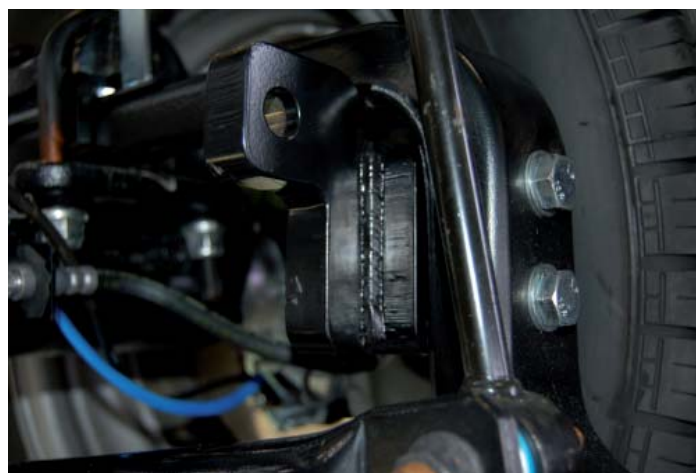


Secure the panhard ball-joint support to the *right* main spring. Put the bolts from the rear side to the front through the support as showed on the picture.

2x M12 x 110 Bolt
4x M12 Washer
2x M12 Locking nut
Torque: 104 Nm



Check



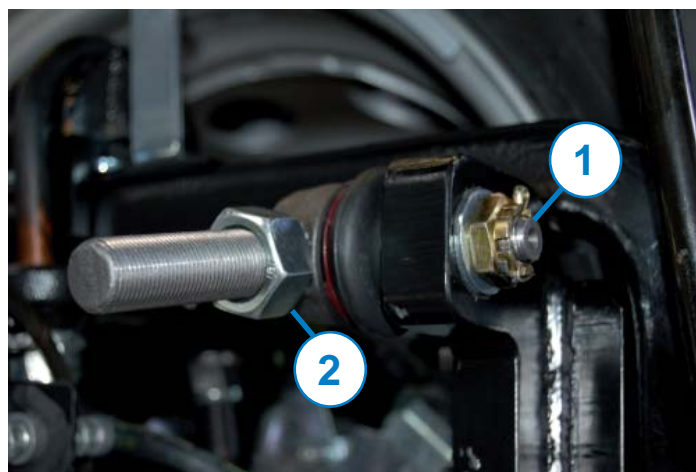
Now secure the panhard rod ball-joint to the support with the supplied nut. Tighten the ball-joint to the right torque and seal the nut with the supplied cotter pin (1).



Torque: 75 - 85 Nm

Check

The nut (2) is to secure the rod from rotating.

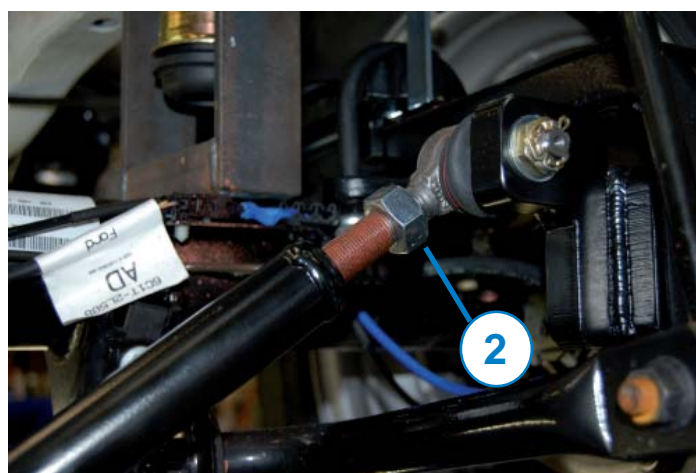


Next, fit the panhard rod to the ball-joint. Use anti-seize compound to secure the rod to the ball-joint. However, do not tighten the nut (2) yet, as the length of the rod has to be determined later on.

Torque: 170 Nm



Check



Attention: The next step can only be done when the vehicle is in ride height! This is at the end of the fitting process!

Measure the distance between the rim and the chassis (**A**) at both sides of the vehicle. These should be the same. If not, one can move the rear axle by changing the length of the panhard rod. Here counts: **1 turn equals 1,5 mm displacement.**

Attention: This step can only be done when the vehicle is in ride height! This is at the end of the fitting process!

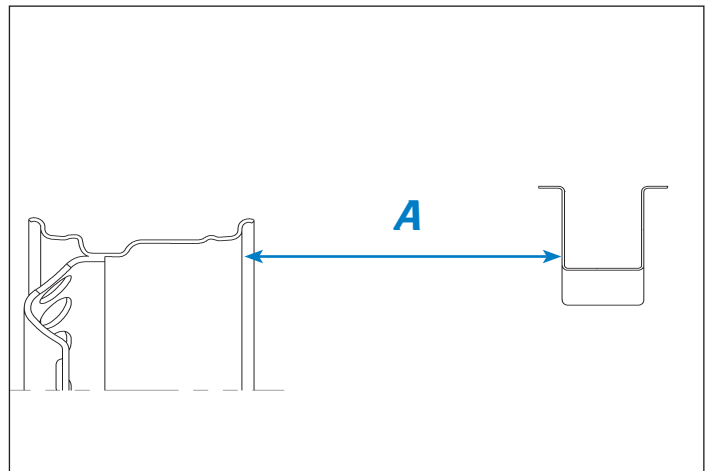
Now tighten the rod (**2**) and do not forget the nut at the ball-joint side! This is to secure the rod from rotating.

1x M16 x 90 Bolt
2x M16 Washer
1x M16 Locking nut
Torque: 200 Nm



Check

**** Do not tighten these bolts yet!**



2.6 The shock-absorbers

The next step is to fit the newly supplied shock absorbers. These shock absorbers can be seen on the picture to the right.

Attention: Before the shock absorbers can be fitted the air has to be removed from them and they have to be adjusted. Follow the following steps for this!

Attention: The wider side of the shock absorbers is considered the top side!

Now the air has to be released from the shock absorbers. To do this, fully press the top of the shock absorber down and then slowly pull it out again until you can't go any further. At the top of the stroke you may hear a slurping sound. This indicates that there's air in the shock absorber. Repeat this step until you cannot hear the sound any more, all the air will be released now. Please notice that this step may take from 2 up to 20 times!

Attention: Keep the top side of the shock absorbers pointing up at all times!

Secure the top side of the shock absorbers to the original place, using the original bolts and nuts. Use a spacer between the shock absorber and the chassis as shown on the picture.

Torque: 125 Nm



**** Do not tighten these bolts yet!**

Check

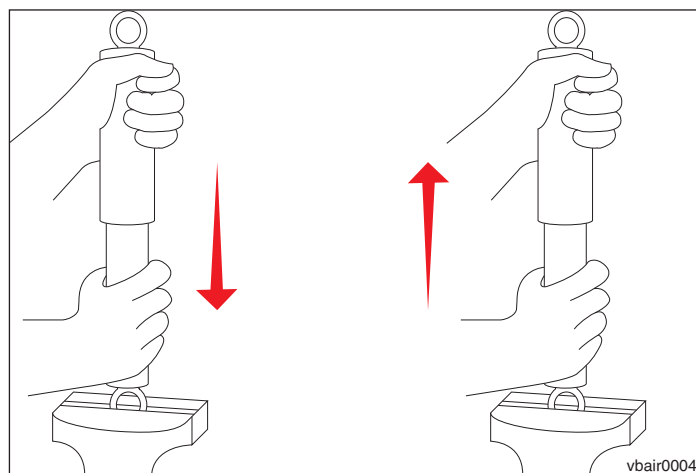
Finally, secure the bottom of the shock absorbers. Use the original bolts to do so.

Torque: 125 Nm



Check

**** Do not tighten these bolts yet!**



2.7 The bumpstops and heightsensors

On the same place as the original bump-stops, the new supplied bump-stops will be fitted. It might be necessary to remove some of the under-chassis protective wax.

Firstly put the fitting-plate under the chassis. The threatened ends must be pointing to the outer side of the vehicle. The two close, must be in front side. Next, the two blocks have to be placed and last but not least the bump-stop. In the picture you can see the fitting order of the left bump-stop.

Attention: Protect the surface with an anti-corrosion substance as for example underbody coating or spray-wax!

Now secure this to the chassis using a bolt and washer. See the picture for result.

2x M10 x 80 Bolt

2x M10 Washer

Torque: 41 Nm



Check



Next, fit both heightsensors in the supports. In the picture you can see the two heightsensor fitted. Pay attention to the difference between the left and right support. Fit the heightsensors with the plug pointing down and in opposite direction as the support.

4x M5 x 10 Bolt

4x M5 Washer

Torque: 6 Nm



Check



Fit the heightsensor support to the fitting-plate which is mounted together with the bump-stops. The heightsensor is pointing to the front of the vehicle. In the picture you can see the supports of the left side of the vehicle.

4x M6 Washer

4x M6 Locking nut

Torque: 8,5 Nm



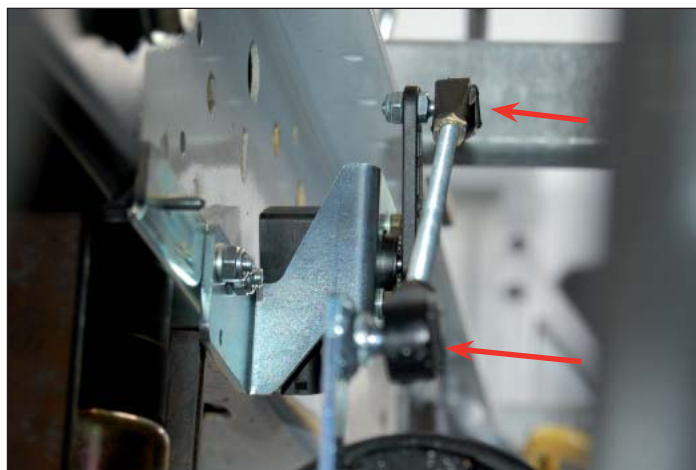
Check



Now fit the vertical rods. The length of the rods supposed to be **205 mm**, measured between the centre of the two black ball-joints.

Attention: The heightsensor lever should point upwards!

Attention: Secure the rods by pressing the clips!



2.8 Fitting of the compressor

Before the compressor can be fitted, firstly the supports have to be fitted. These have to be fitted to the same bolts as the front spring brackets, on the inner side of the chassis.

Attention: For left-hand-driven vehicles, the compressor has to be fitted on the left side. For right-hand-driven vehicles the compressor has to be fitted on the right side.

First loosen two nuts and fit the first support. Secure this supports using the two original nuts before the other bolts are loosened.

Attention: Do not loosen all nuts together to avoid moving of the front spring bracket!

Next fit the other support on the same way as the support before. The open sides has to point to each other.

Torque: 74 Nm



Check

The next step is to fit the compressor to its place. Mount it to its support as showed in the picture. Use the four holes on the upper and under side of the supports to secure the compressor.

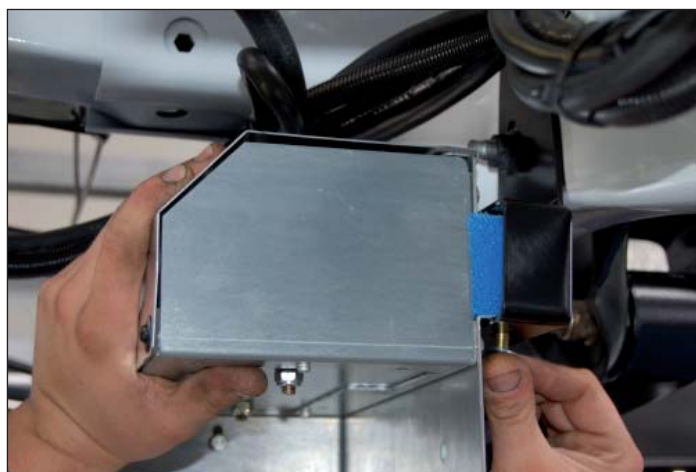
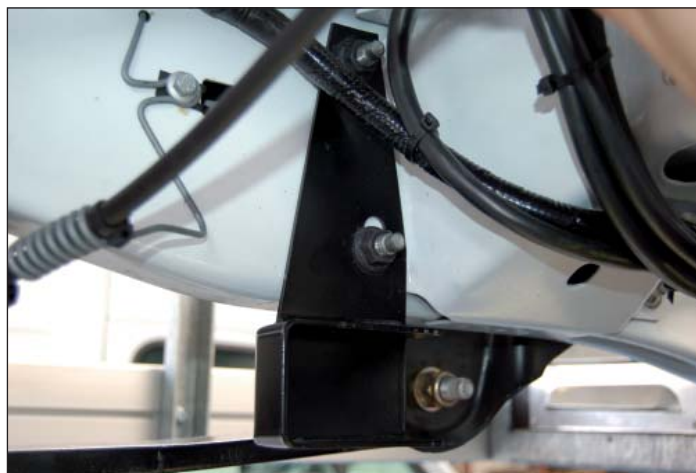
4x M8 x 20 Bolt

4x M8 Washer

Torque: 20,5 Nm



Check



2.9 Fitting of the air-tubes

Now the wires have to be placed. The easiest way is to connect the rear part first.

First the air-tubes have to be fitted. Use these lengths:

Left hand driven vehicle:

Left: 1,5 m

Right: 2,2 m

Right hand driven vehicle:

Left: 2,2 m

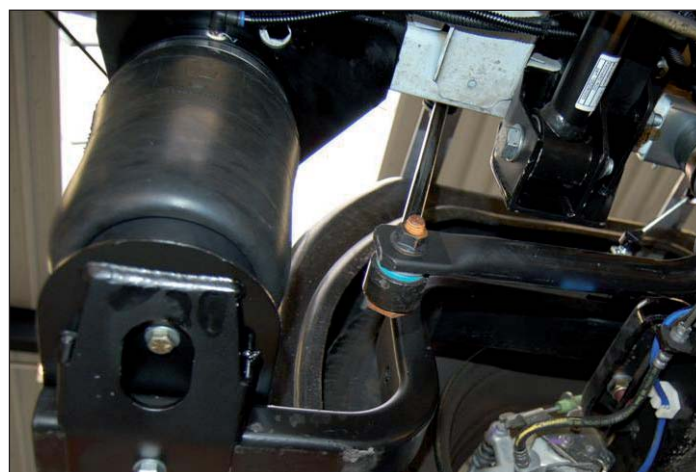
Right: 1,5 m

Connect the **black** air-tube for the right to the air-spring. Lead it (in case of a left hand driven vehicle, along the reaction arm), along the original wiring harness to the compressor.



Attention: Make sure that the tubes are clean and cut straight. Use a special tool to cut the tubes which is deliverable from VB-Airsuspension.

Connect the **green** air-tube for the left to the air-spring. Lead it (in case of a right hand driven vehicle, along the reaction arm), along the original wiring harness to the compressor.



Attention: Avoid possible stress in the connectors and wires!

Attention: Make sure the tubes can't bend, chaff or get near moving or heated parts.

2.10 Fitting of the wiring harness

In case the vehicle is right hand driven, skip this step.

Use the same route as the tubes to lead the height-sensor cables of the VB-Airsuspension wiring harness to the heightsensors. Connect the plugs to the heightsensors. Skip next step.



This step is only for right hand driven vehicles.

Lead the heightsensor cables, along the chassis crossbeam to the other side of the vehicle to the left heightsensor and connect the connector.

Lead the other heightsensor cable along the reaction arm to the right heightsensor and connect the connector.

Now start from the heightsensors to secure the cables and tubes with tie-wraps. Use the supplied special tie-wraps to secure the wires along the reaction arm. Next, secure the air-tubes and cables along the original wiring harness to the compressor.

Connect the air-tubes to the compressor. Green for the left air-spring, Black for the right air-spring, also marked on the valve block.

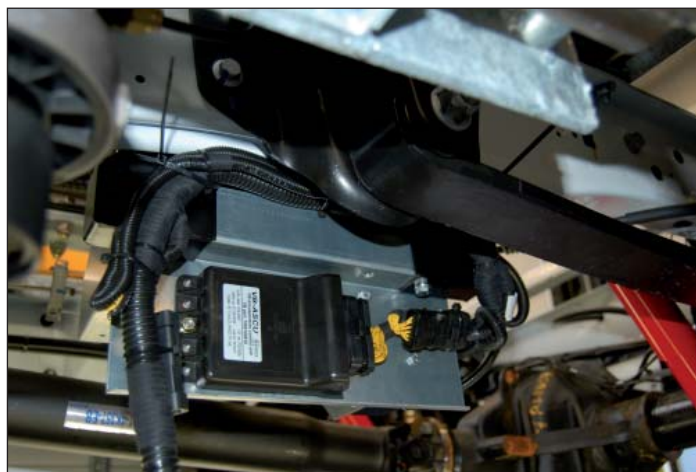
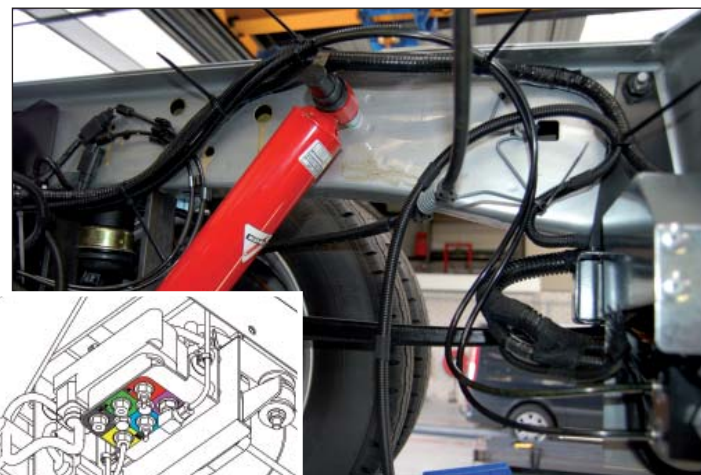
Lead the remaining length of the heightsensor wires along the front part of the wiring harness and secure it with tie-wraps, as you can see on the picture.

Attention: Make sure the cables can't bend, chaff or get near moving or heated parts. Secure the cables properly with tie-wraps!

Lead the wiring harness along the chassis to the front of the vehicle.

Attention: In case the vehicle is right hand driven, the wiring harness has to be lead along the right side of the chassis to the front.

Attention: It is strictly prohibited to secure anything to the brake-lines!



Lead the wiring harness through the same hole as the filling pipe of the fuel tank and lead it through the hole on the front side out of the beam (see inlay picture).

Attention: In case the vehicle is right hand driven, route of the wiring harness is mirrored.

Tip: Use tape to secure all the plugs and wires to each other to lead the wiring harness more easily through the holes.

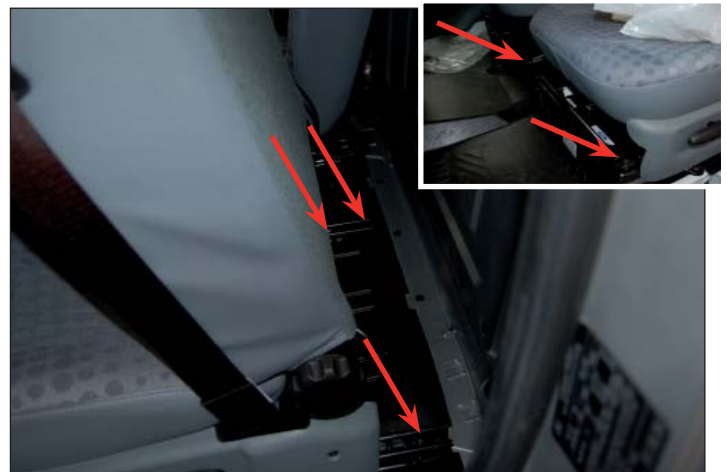
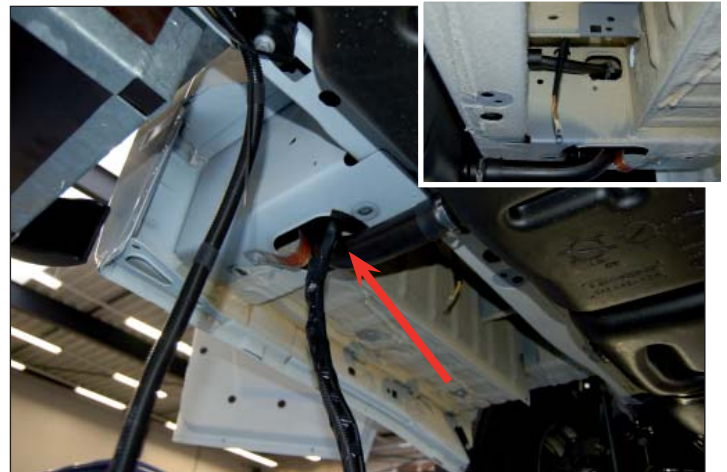
2.11 In the cab

First remove the step-in. To do this, first loosen the two nuts on the underside of the vehicle (see inlay picture) and next loosen the three bolts on the inside of the cab as showed in the picture.

Attention: In case the vehicle is right hand driven, route of the wiring harness is mirrored.

Now remove the driver seat. To do so, loosen the bolts as showed in the pictures.

Lead the wiring harness through the hole in the seat console.



Start by connecting the fuse holders to the cable-tree. Slide the terminals of the red wires into a fuse-holder and put a **40 A** fuse in it (**Z1**). Now slide the terminals of the yellow wires into the other fuse-holder and put a **7,5 A** fuse in (**Z2**).

Attention: In case an external air-supply is used instead a compressor Z1 will also be 7,5A!

Lead the thick red cable and brown cable to the battery and connect the red cable to the plus (+) and the brown cable to the grounding point (-)

Put the fuse holder on a visible place and mark them with a label as showed on the inlay picture.

Lead the remaining cable with the two white plugs to the front-right side of the console.

Attention: Secure the cables properly, using plenty of tie-wraps.

2.11.1 The handbrake signal

First remove the cover of the handbrake as showed on the picture.

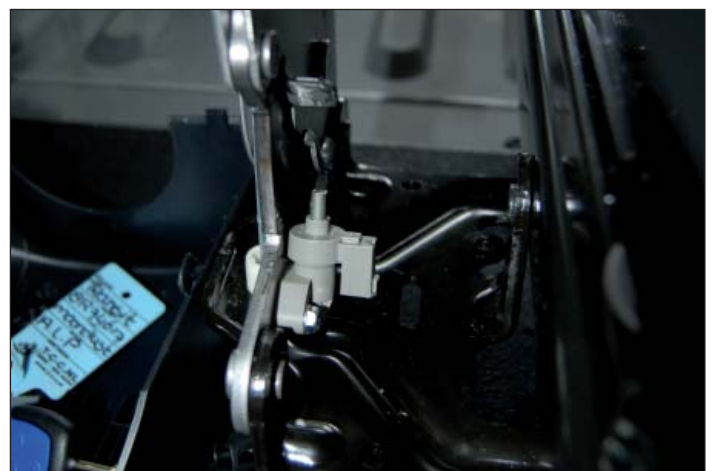
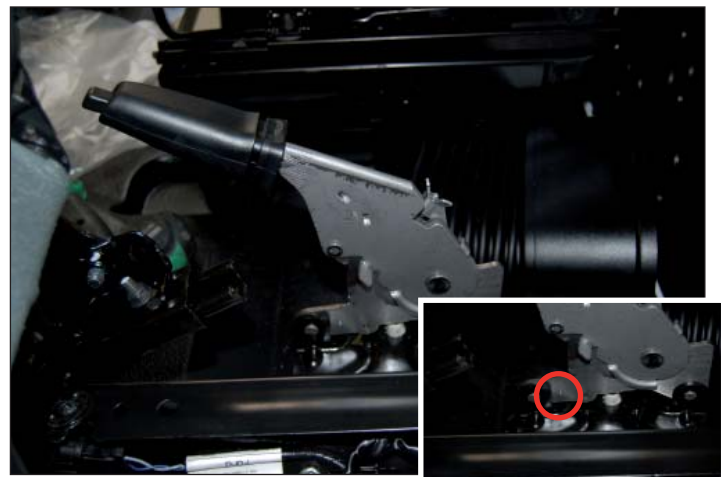
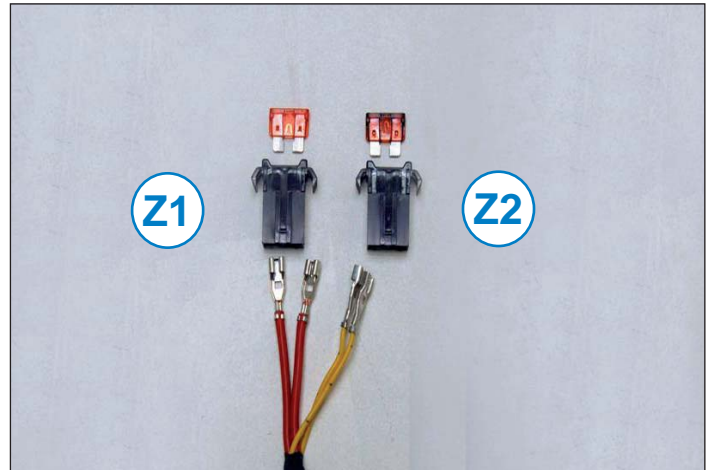
When there is already a handbrake switch fitted, follow the next step. When not, skip the next step.

Disconnect the wire from the switch.

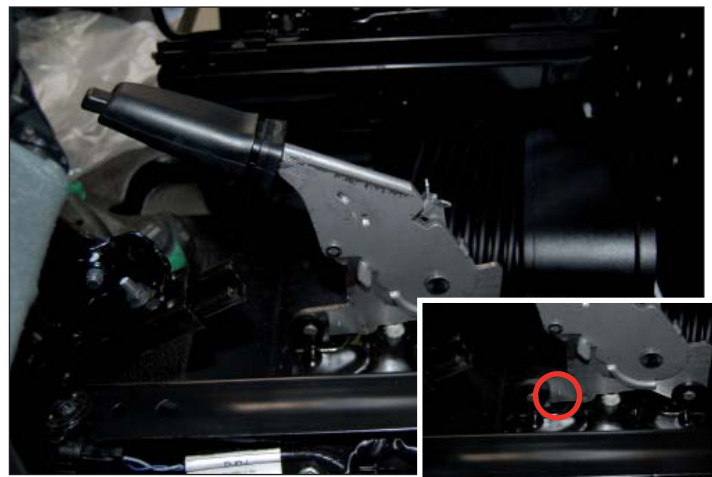
Connect the supply cable to the white connector of the VB-wiring harness. Lead the cable to the handbrake switch and connect the connectors to the switch and disconnected wire.

Re-fit the cover to the handbrake. Continue the manual at **2.11.2**.

Attention: Secure the cables properly, using plenty of tie-wraps.



The marked hole on the inlay picture has to be enlarged to \varnothing 4,5 mm.



Now fit the supplied switch.

1x M4 x 20 Bolt
2x M4 Washer
1x M4 Locking nut

Connect the supply cable to the white connector of the VB-wiring harness. Lead the cable to the handbrake switch and connect the connector to the switch. Leave the remaining connector free.

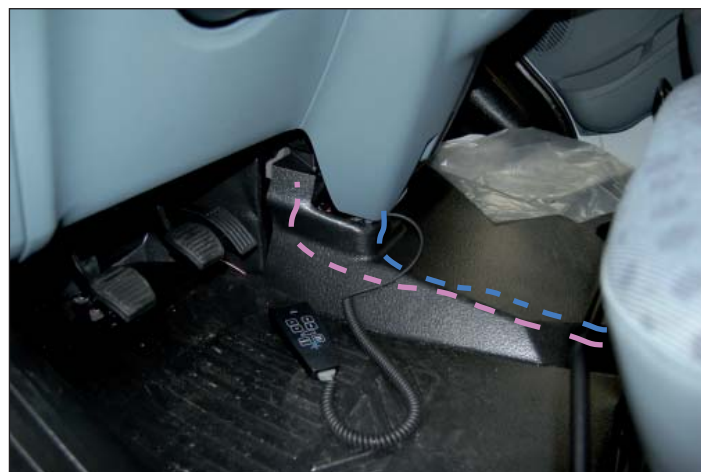
Re-fit the cover to the handbrake



2.11.2 The ignition feed

Lead the pink wire through the hole in the seat console along the pink link underneath the floor mat to the centre console. Also lead the cable of the remote control in the same way underneath the floor mat following the blue line (only in case the recommended position of VB is applied).

Attention: In case the vehicle is right hand driven, route of the wiring harness is mirrored.



Remove the lids from the steering console. First pull lid 1 off on the marked place.

Next, remove the radio-control (2). See the inlay picture for the place of the clip which have to be pushed while removing. Also disconnect the plug.

Now remove the lid 3. To do so, loosen the two screws on the underside. The steering axle is visible now.



Next, remove the marked connector (2) from the house (1). Lead the pink wire to this connector.

Attention: Secure the cables properly, using plenty of tie-wraps.

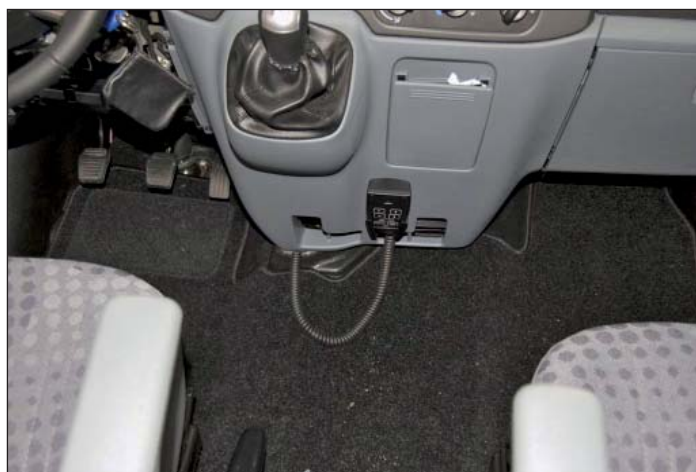
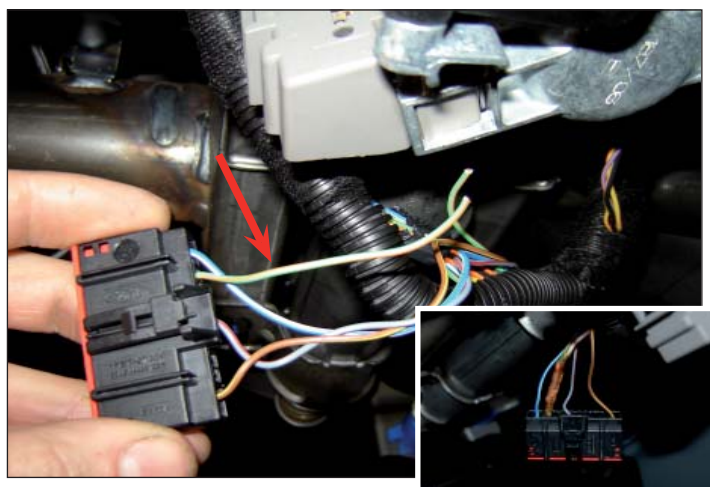
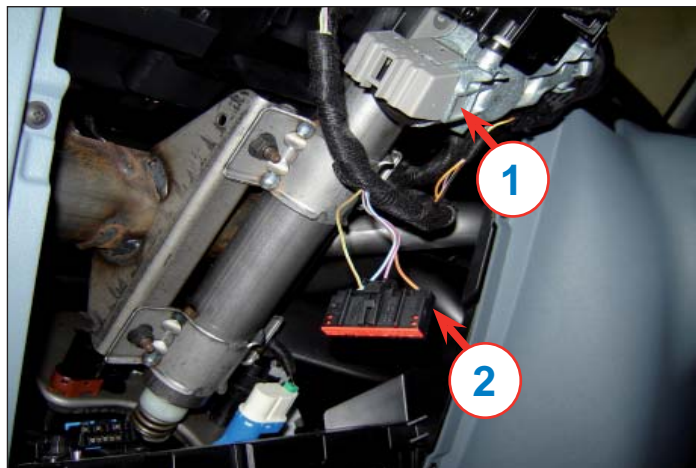
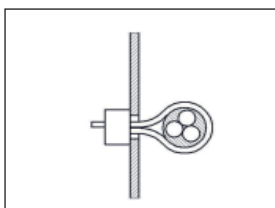
Connect the pink wire of the feed cable to the orange/green striped wire in the connector described before.

Use the supplied waterproof crimp and seal connector to connect the wires.

Find a good position for the remote-holder and lead the curled cable to it, underneath the upholstery. The position shown on the picture in the next step is recommended.

Attention: Make sure *NEVER* to get in the way of airbags!

Hang the remote in the holder and secure the end of the cable with a tie-wrap to keep tension from pulling the cable out of the connector. The seat console is a good point for creating this strain relief. On the small picture underneath one can see an example.

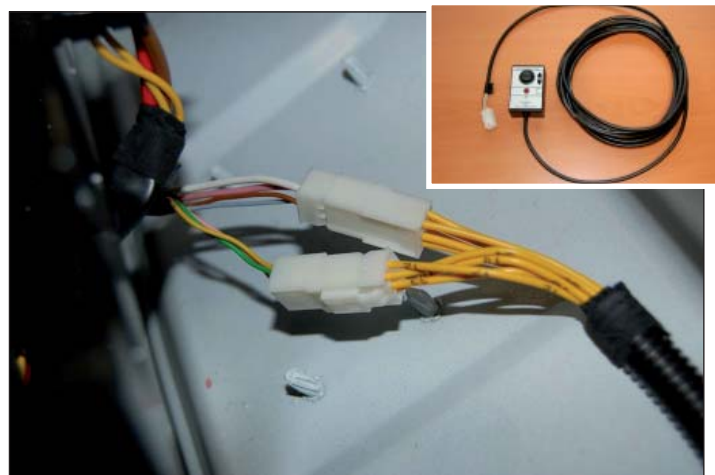


2.12 Calibrating

Make sure the air-suspension system is functioning properly. Switch off the ignition and remove the fuses of the fuse holder. Please check the picture for more details ([Z1](#) + [Z2](#)).



Disconnect the connector of the remote control in the seat console. Connect the calibrating unit (see picture) to the connector and put the fuses back in place.

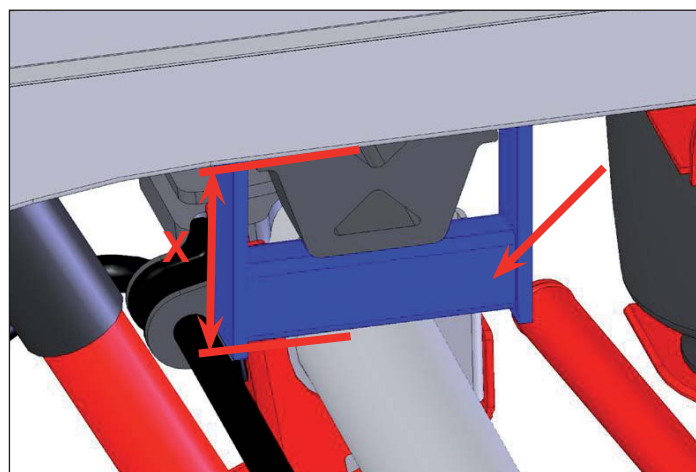


Now turn-on the ignition again. Use the calibrating device to raise or lower the vehicle enough to create space for the calibres.

Check whether the height (**X**) of the calibres is **160 mm**.

Put the calibres between the rear axle and chassis as can be seen on the picture to the right. Now remove **all** air from the springs

Wait at least **one minute** to allow the ASCU to automatically save the X value. During this one minute the LED will blink fast. Once the ASCU has stored this, the LED blink will become slow. Do not touch the raise/lower switch at the calibrating device during this time or the process will start over again!



Pump some air into the springs to loosen the calibres. Remove the calibres and then remove the fuses again.

Now disconnect the calibrating unit, re-connect the remote control and re-fit the fuses.

Finally, align the rear axle as described on page 14. After this, secure all bolts which have been marked by ***** Do not tighten these bolts yet!**

2.13 Completion

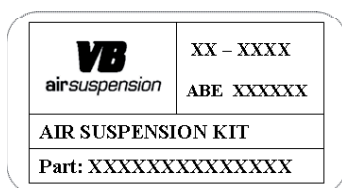
Fit the removed lids of the steering console back in place. Also put the step-in back in place. Use the original bolts and nuts to secure it.

Also fit the driver seat back in place. Use the original bolts to secure it.



Stick the supplied warranty stickers **A and B** on the B-pillar on the passenger side as shown on the picture.

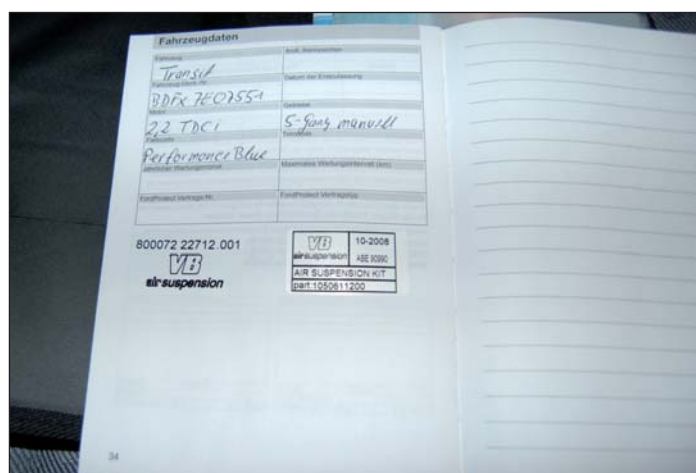
A

B

Stick the sticker **B** on the panhard support as showed on the picture.



Also fill the fitting of the air-suspension in to the maintenance booklet. See picture for details.



3 Checklist

1. System finishing

OK

- | | | |
|------|---|--------------------------|
| 1.1 | Chassis height, near the rear axle, checked according to the X-value | <input type="checkbox"/> |
| 1.2 | Rear axle aligned, 3 mm tolerance allowed | <input type="checkbox"/> |
| 1.3 | Heightsensor correctly fitted | <input type="checkbox"/> |
| 1.4 | Shock absorbers set-up and relieved of air | <input type="checkbox"/> |
| 1.5 | Bolts tightened to the right torque and checked off in fitting instructions | <input type="checkbox"/> |
| 1.6 | Tubes, cables and connectors correctly secured | <input type="checkbox"/> |
| 1.7 | System checked for air-leaks | <input type="checkbox"/> |
| 1.8 | Space around the air-springs checked | <input type="checkbox"/> |
| 1.9 | Documentation present | <input type="checkbox"/> |
| 1.10 | Warranty form filled out and identification sticker fitted | <input type="checkbox"/> |

2. Functions of system

OK

- | | | |
|-----|--------------------|--------------------------|
| 2.1 | Manual raising | <input type="checkbox"/> |
| 2.2 | Automatic lowering | <input type="checkbox"/> |
| 2.3 | Manual lowering | <input type="checkbox"/> |
| 2.4 | Automatic raising | <input type="checkbox"/> |
| 2.5 | Testdrive approved | <input type="checkbox"/> |

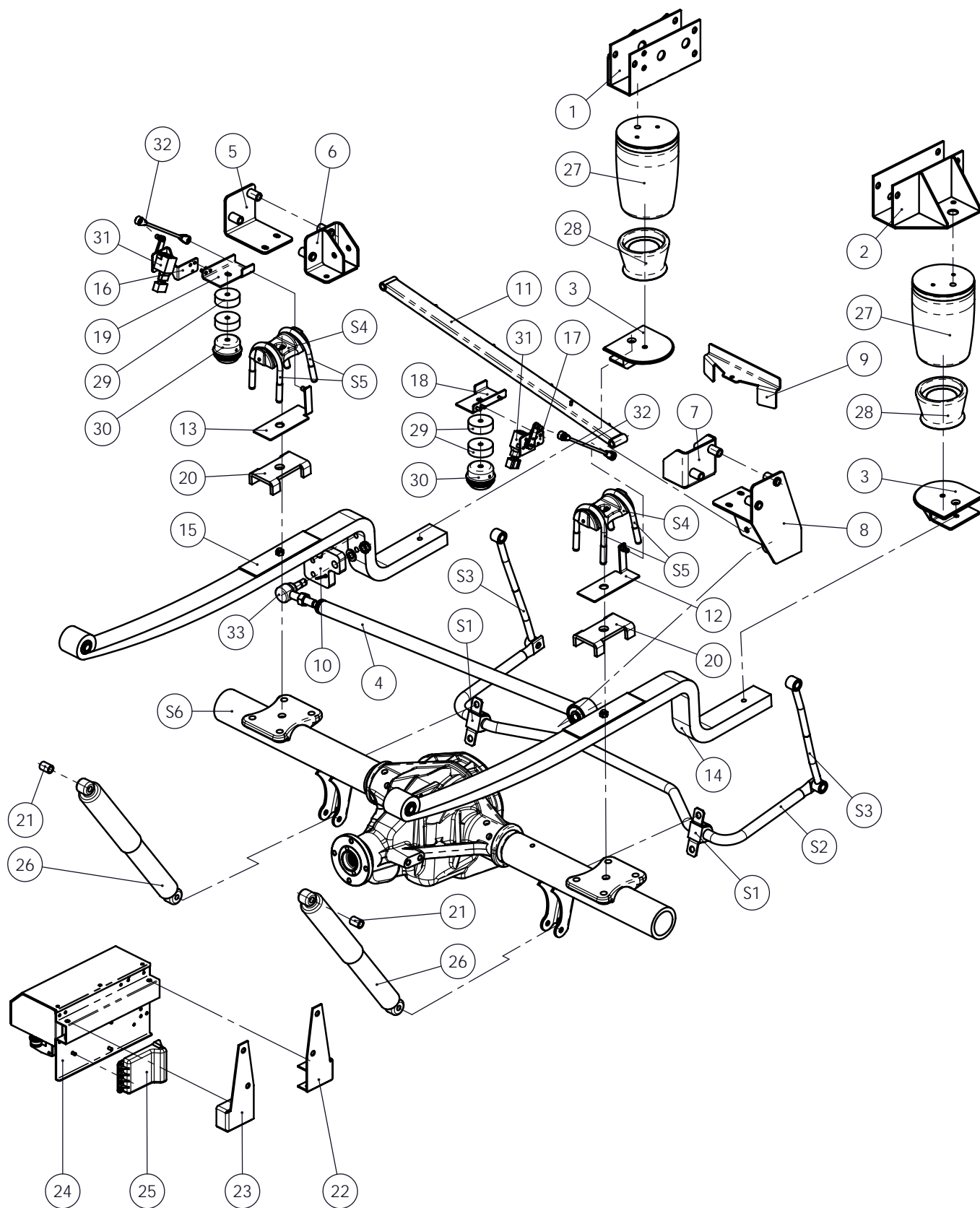
4 Torque recommendations

Torque values represented here are intend to be for general information, not for specific installations. In special instances, where the torque values of the factory service manual deviate from the torque values recommended here, always follow the factory service manual.

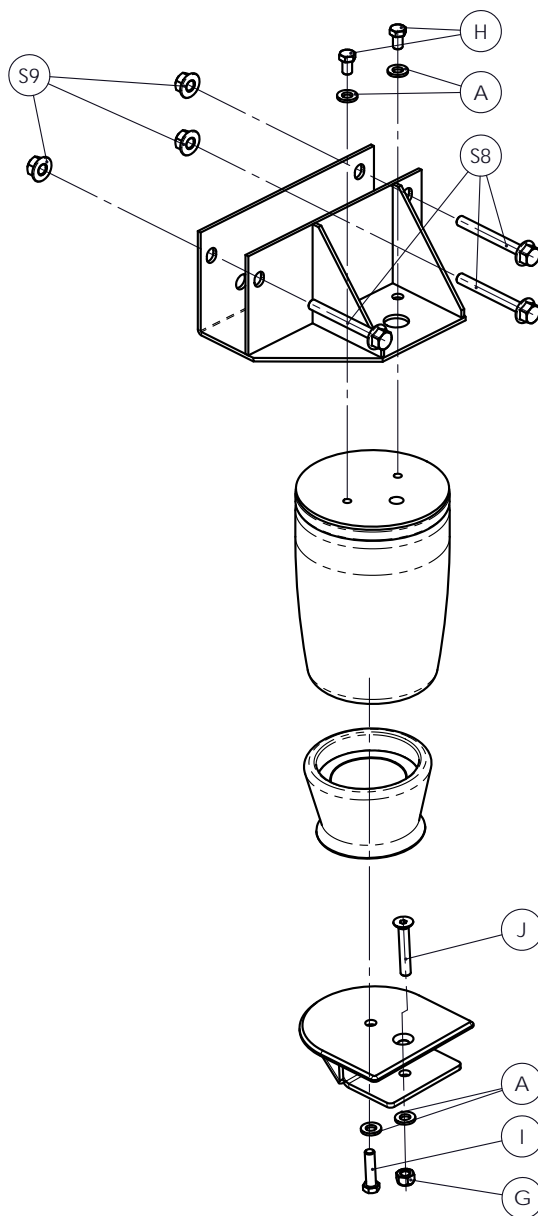
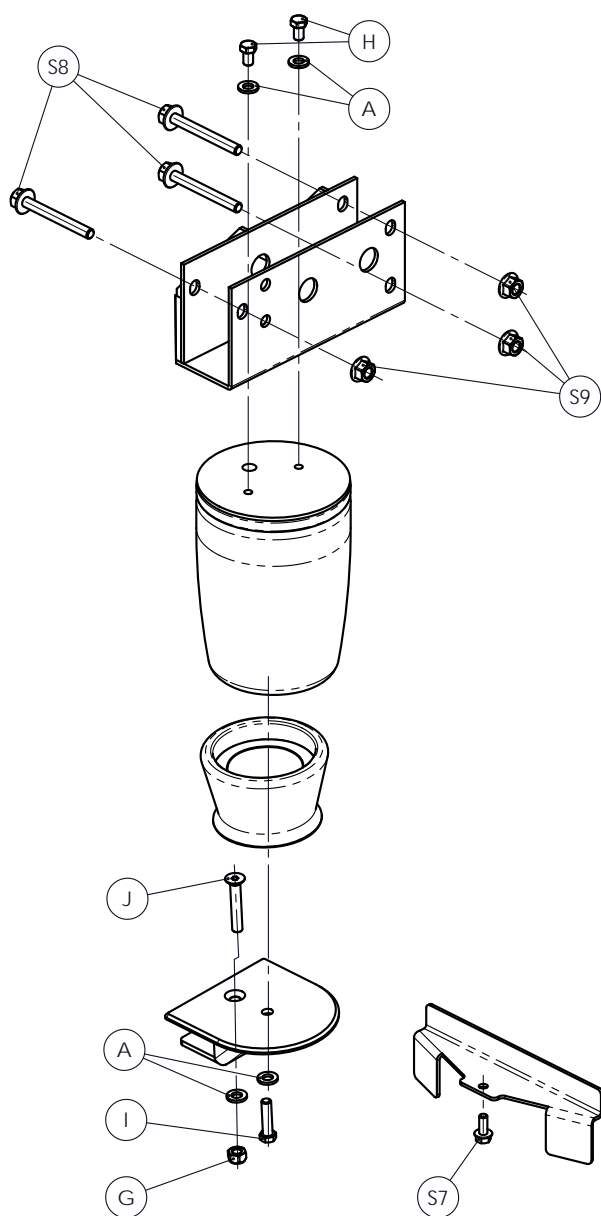
Bolt type.	Grade 8.8	Grade 10.9
M6 x 1.00	8.5 Nm	12.5 Nm
M7 x 1.00	14 Nm	20.5 Nm
M8 x 1.00	22 Nm	32 Nm
M8 x 1.25	20.5 Nm	30 Nm
M10 x 1.00	45 Nm	67 Nm
M10 x 1.25	43 Nm	64 Nm
M10 x 1.50	41 Nm	60 Nm
M12 x 1.25	77 Nm	112 Nm
M12 x 1.50	74 Nm	108 Nm
M12 x 1.75	71 Nm	104 Nm
M14 x 1.50	121 Nm	175 Nm
M14 x 2.00	113 Nm	165 Nm
M16 x 1.50	180 Nm	270 Nm
M16 x 2.00	170 Nm	250 Nm
M18 x 1.50	270 Nm	390 Nm
M18 x 2.50	245 Nm	350 Nm
M20 x 1.50	380 Nm	540 Nm
M20 x 2.50	350 Nm	490 Nm
M22 x 1.50	510 Nm	720 Nm
M22 x 2.50	470 Nm	670 Nm

All the above listed torque values are in Nm. (NOT in lb.-ft.) The tolerance on the values is +/- 10%.

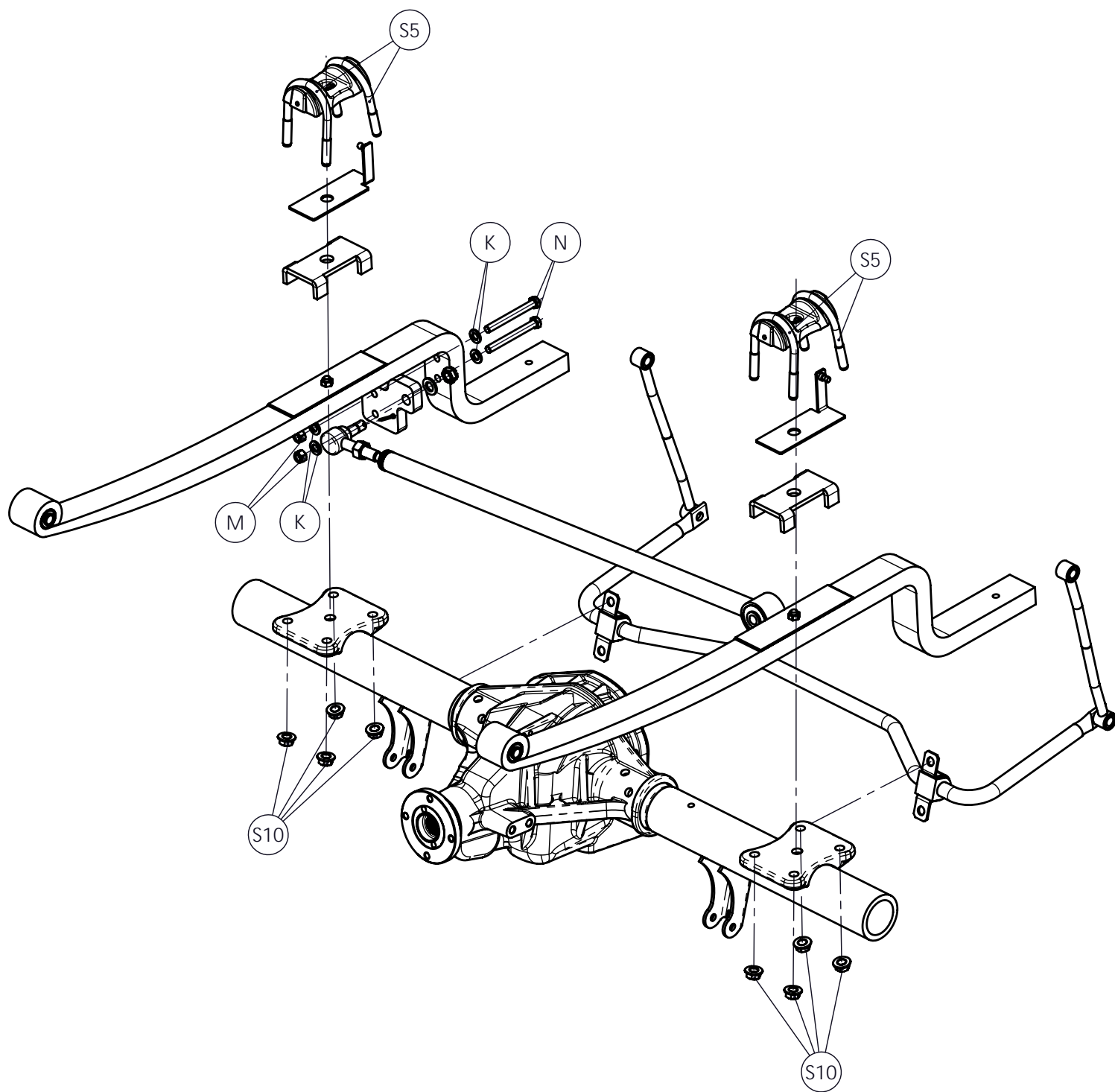
5 Exploded view



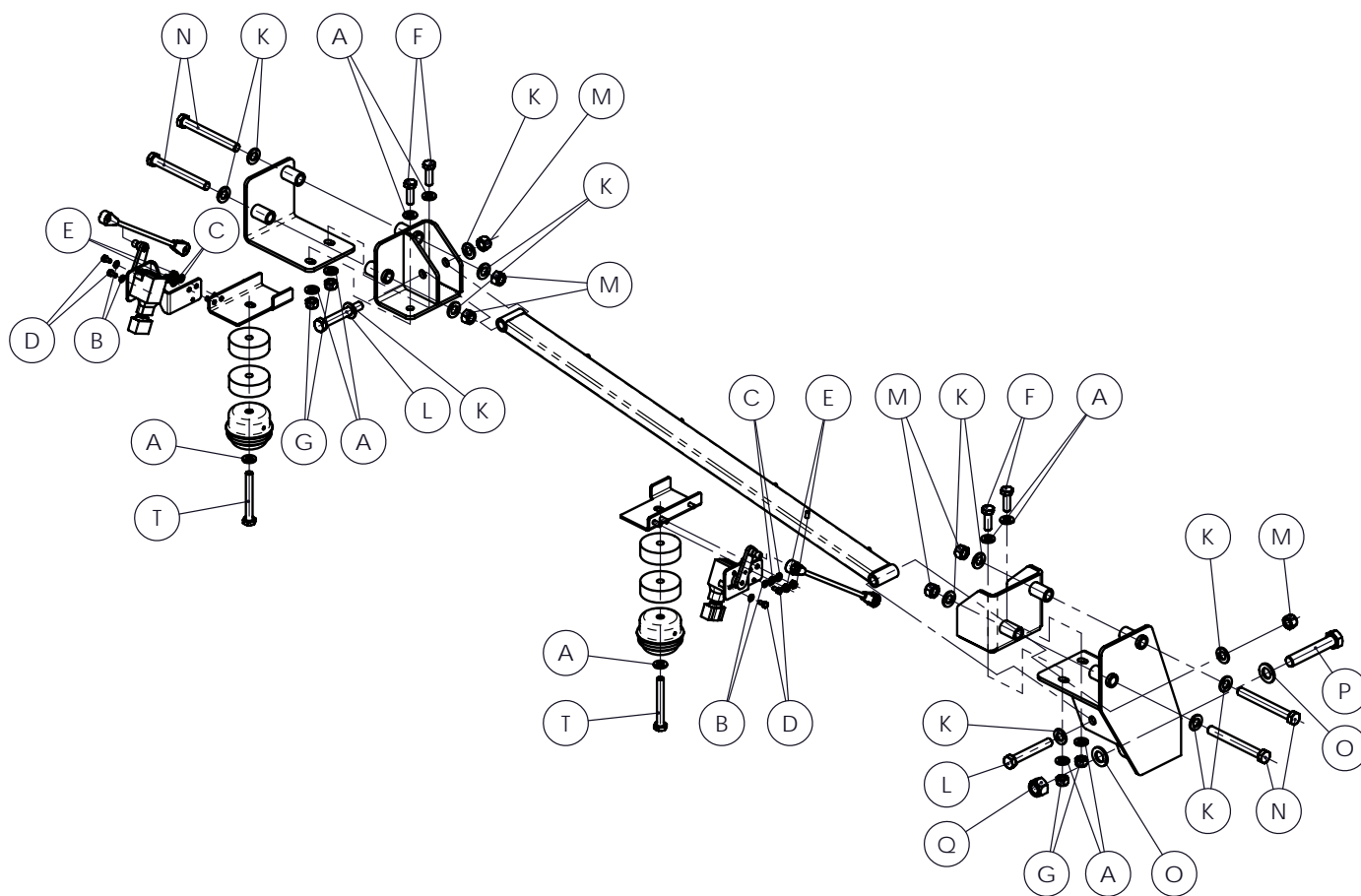
<i>Item</i>	<i>Qty</i>	<i>Description</i>	<i>Order nr.</i>
1	1	Air-spring support left	1052041260
2	1	Air-spring support right	1052041265
3	2	Underplate	1052050054
4	1	Panhard rod	1052060058
5	1	Mounting support reaction arm	1052040056
6	1	Reaction arm support	1052040057
7	1	Mounting plate panhard support	1052060059
8	1	Panhard rod support chassis	1052060060
9	1	Spare tire support	1052065718
10	1	Panhard rod support main spring	1052060061
11	1	Reaction arm	1052040058
12	1	Ball-joint support left	1052090073
13	1	Ball-joint support right	1052090074
14	1	Main spring left	1052011701
15	1	Main spring right	1052011706
16	1	Heightsensor support left	1052090057
17	1	Heightsensor support right	1052090056
18	1	Mounting support bump-stop left	1052090058
19	1	Mounting support bump-stop right	1052090059
20	2	Centre plate main spring	1052021250
21	2	Spacer	0014300012
22	1	Compressor support rear	1052130075
23	1	Compressor support front	1052130076
24	1	Compressor-unit	1052130098
25	1	VB-ASCU	
26	2	Shock absorber	1052104045
27	2	Air-spring	1052032500
28	2	Piston medium/heavy	1052030112 / -0123
29	4	Filling block bump-stop	1052025716
30	2	Bump-stop	1052151270
31	2	Heightsensor	1052091030
32	2	Heightsensor rod	1052095028
33	1	Panhard rod ball-joint	1052061416



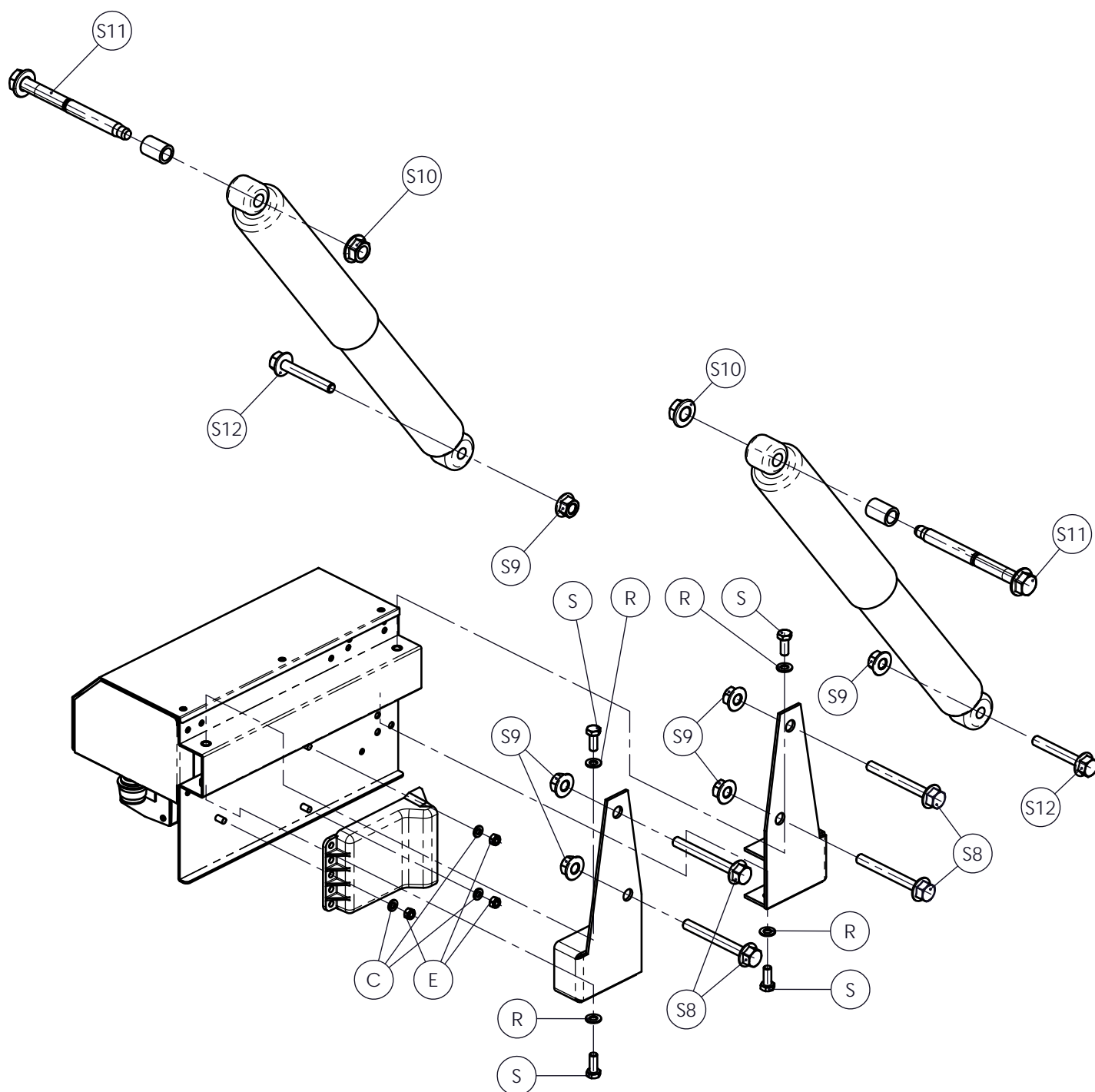
<i>Item</i>	<i>Qty</i>	<i>Description</i>	<i>Order nr.</i>	<i>Remarks</i>
A	18	Washer M10	0011210000A	
G	6	Steel locking nut M10	0011010001AA	
H	4	Bolt 3/8" x 5/8"	0010238058A	
I	2	Bolt 3/8" x 1½"	0010238112AA	
J	2	Countersunk Bolt M10x60	0010510060CA	



<i>Item</i>	<i>Qty</i>	<i>Description</i>	<i>Order nr.</i>	<i>Remarks</i>
K	16	Washer M12	0011212000A	
M	8	Steel locking nut M12	0011012001AA	
N	6	Bolt M12x110	0010112110CA	

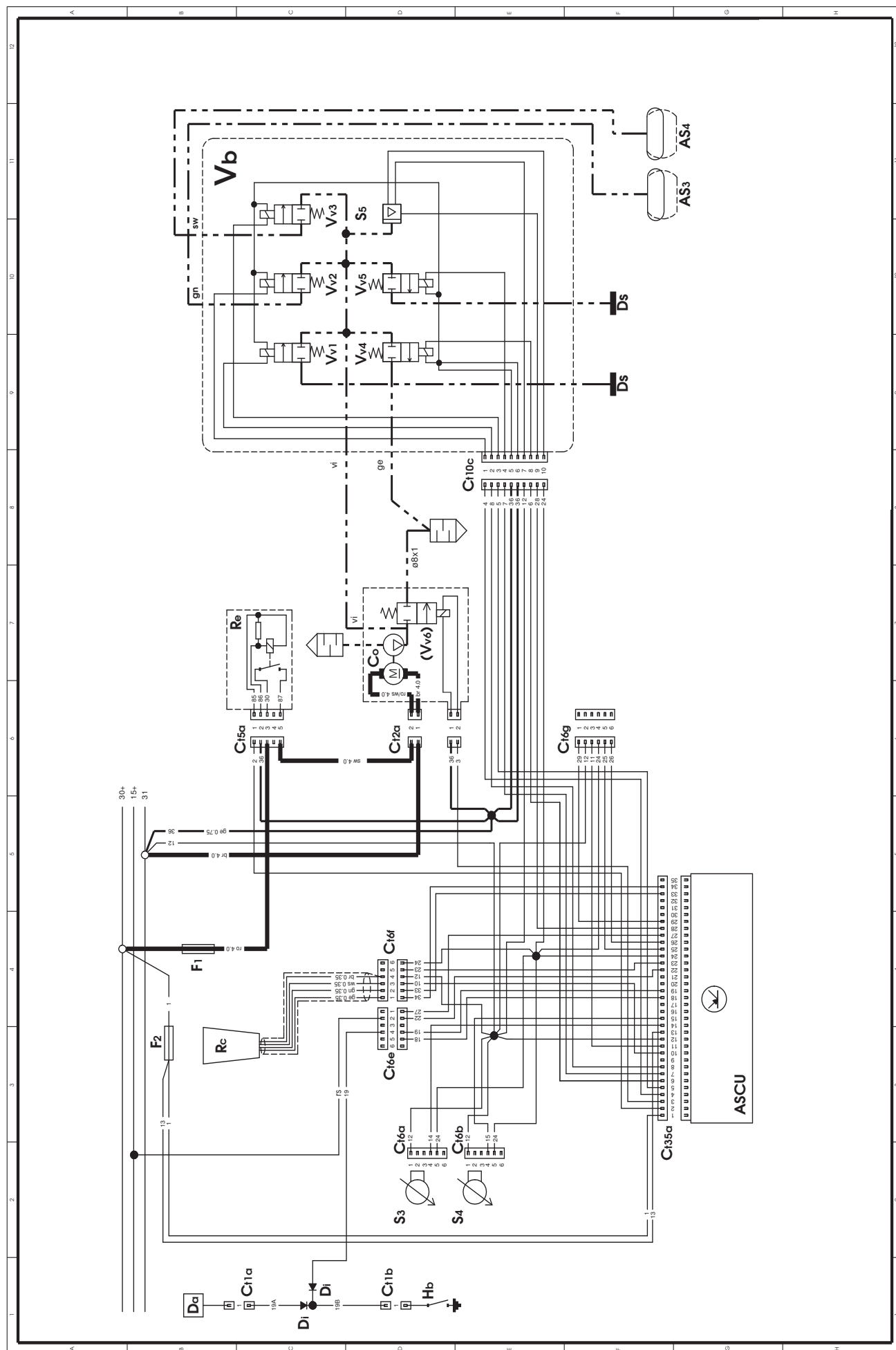


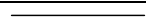
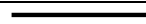



<i>Item</i>	<i>Qty</i>	<i>Description</i>	<i>Order nr.</i>	<i>Remarks</i>
A	18	Washer M10	0011210000A	
B	4	Washer M5	0011205000A	
C	4	Washer M6	0011206000A	
D	4	Bolt M5x10	0010105010AA	
E	7	Locking nut M6	0011006000AA	
F	4	Bolt M10x30	0010110030CA	
G	6	Steel locking nut M10	0011010001AA	
K	16	Washer M12	0011212000A	
L	2	Bolt M12x80	0010112080CA	
M	8	Steel locking nut M12	0011012001AA	
N	6	Bolt M12x110	0010112110CA	
O	2	Washer M16	0011216000A	
P	1	Bolt M16x90	0010116090CA	
Q	1	Steel locking nut M16	0011016001AA	
T	2	Bolt M10x80	0010110080AA	



<i>Item</i>	<i>Qty</i>	<i>Description</i>	<i>Order nr.</i>	<i>Remarks</i>
C	4	Washer M6	0011206000A	
E	7	Locking nut M6	0011006000AA	
R	4	Washer M8	0011208000A	
S	4	Bolt M8x20	0010108020AA	

6 Wiring diagram



ASCU	VB-ASCU control unit
AS3	airspring left axle 2
AS4	airspring right axle 2
Ct1a	connector, 1-pole, to dashboard
Ct1b	connector, 1-pole, to handbrake
Ct2a	connector, 2-pole, compressor
Ct2b	connector, 2-pole, valve on compressor
Ct5a	connector, 5-pole, relay Re
Ct6a	connector, 6-pole, height sensor S3
Ct6b	connector, 6-pole, height sensor S4
Ct6e	connector, 6-pole, VB supply cable
Ct6f	connector, 6-pole, remote control Rc
Ct6g	connector, 6-pole, options near compressor
Ct10c	connector, 10-pole, valve block
Ct35a	connector, 35-pole, VB-ASCU control unit
Co	compressor
Da	dashboard
Di	diode (not in all versions)
Ds	screw plug
F1	fuse 40A
F2	fuse 7,5A
Hb	handbrake
Re	compressor relay
Rc	remote control with spiralcable
S3	height sensor, axle 2 left
S4	height sensor, axle 2 right
S5	pressure sensor, in valve block
Vb	valve block
Vv1	valve right axle 1, in valve block
Vv2	valve left axle 2, in valve block
Vv3	valve right axle 2, in valve block
Vv4	dumpvalve, in valve block
Vv5	valve left axle 1, in valve block
Vv6	valve, in compressor
<i>Colors: (not mentioned is yellow with numbers)</i>	
bl	blue
br	brown
ge	yellow
gn	green
ro	red
ro/ws	red/white
rs	pink
sw	black
vi	violet
ws	white
	0,75 mm2
	0,75 mm2 (or 1,5mm2 when longer then 4m)
	4,00 mm2
	airtube PA12 ø4x1 (color see diagram)
	airtube PA12 ø8x1



VBairsuspension B.V.
postbus 130 7050 AC Varsseveld
Frankenweg 3 Varsseveld
The Netherlands
T: +31 (0)315 241075 F: +31 (0)315 244232
www.vbairsuspension.com

VBairsuspension France S.A.R.L.
73, rue Principale
67310 Traenheim
France
T: +33 (0)689-062469
www.vbairsuspension.fr

VBairsuspension UK L.T.D.
Unit 13, Elder Court, Lions Drive
BB1 2EQ Blackburn, Lancashire
United Kingdom
T: +44(0)1254 848010 F: +44 (0)1200300110
drinkwater@vbairsuspension.co.uk

