

Assembly Instructions BR 13x-3

Box kits



MA13X3.ENG1_032019

Please be sure to read these instructions carefully and completely before commencing the installation.



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1. Safety and warning instructions



This manual explains the assembly of kits 133-3 to 139-3. In order to generate a fault-free structure, absolutely adhere to the work instructions described here, particularly the following warning notes, the guarantee otherwise expires. Coloured representations serve for illustration only. **Get in touch with us immediately in case of uncertainties.**

1.1 Checking the scope of delivery

- **Check the shipment against the enclosed packing list for completeness.** Notify any damage incurred during transit immediately to the delivering forwarding agent. Please understand that we must reserve the right to make changes to the delivery in form, equipment and technology. *Please find the general scope of delivery on page 14.*

1.2 Warning instructions

AluTeam does not normally know how the kit is going to be used. **As the vehicle constructor, you must co-ordinate the order and processing of the kit to the needs of your customer, as well as to the installation guidelines of the vehicle manufacturer.** This also applies to the related materials and surface conditions. Damage caused by transported goods such as aggressive chemicals, do not represent a reason for complaint.

- Store the kit dry and clean (not outside).
- To ensure that no (splashed) water penetrates into the structure, the sealing cords in the panels must not show any signs of damage.



Excessive torque

Fig. 122

- The seating faces of the module assemblies must be free from contamination and dirt.
- Never apply screws diagonally, they must not tilt. **Consider the torques** (2.3). Undershooting weakens the strength of the system, a clear overshooting can lead to damage to component parts!
- Connect the component parts directly with the supplied screws. They may be used one-time only. External or used screws endanger operational safety. **Always use new AluTeam screws** also for repairs.

1.3 Safety instructions

Pay attention to your own safety and to that of your employees. Working with kits involves hazards. Therefore caution is always advised, in particular you should absolutely:

- ... Use a lifting beam when unloading or transporting of the packed kit with a crane.
- ... Secure the kit against inclination, tilting and toppling over when unloading/transporting the packed kit with a forklift.
- ... Only place transportation frames onto flat surfaces, and secure them against inclination, tilting and toppling over (Fig. 132).
- ... Always wear a helmet during crane work and only lift module assemblies vertically and not at an angle. Never step under raised loads. The suspension in the crane must always be above the centre of gravity of the assembly.
- ... Remove all the packaging straps at the time of installation in the specified sequence, and remove the white packing straps first. The individual components or groups are attached with a red packing strap. Secure the part to be taken out against tipping over before cutting the packing strap (Fig. 133/134).
- ... In case of utilisation of an assembly carriage, secure it against rolling away.
- ... Provided that you raise the floor over the airline rails, using a minimum of 2 double-stud fittings for that with sufficient load-bearing capacity.
- ... Only lift the roof with a lifting beam or vacuum suction-unit! The mounting brackets (airline rails) are used for this purpose only as an assembly aid. **Risk of pulling out!**
- ... Comply with the legal specifications, such as StVZO, BGV D 29, BGV A1, BGG 915, BGG 916. This is the responsibility of the vehicle manufacturer.
- ... For cleaning and sealing work, make sure there is sufficient aeration and ventilation, and observe the processing specifications and the safety and disposal regulations of the adhesive/ sealant manufacturer. Please request the safety sheet and the processing specifications from the manufacturer printed on the cartridge or under **+49 (0)521 4173-1110**.

1.4 Copyright

The copyright of these instructions belongs to AluTeam. They are only intended for the professional assembly company and its staff and, either in total or in parts, may not be:

- reproduced
- disseminated or
- disclosed in any other way.

Contraventions can have civil and criminal legal consequences!



Fig. 131



Fig. 132

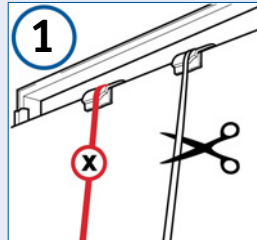


Fig. 133

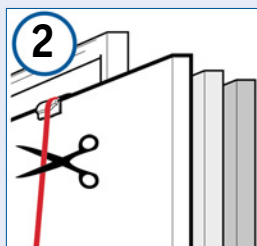


Fig. 134



Fig. 14

2. Preparatory work / Human resources

AluTeam kits can be assembled in any well-equipped workshop! Implement the following preparations beforehand:

Fig. 21

2.1 Human resources, preparations

For the assembly of the box kits 133-3 to 139-3, 1-2 fitters are required with training as a vehicle and car body constructor, or equivalent training, are required depending on the size of kit.

- Check that delivery & order agree (1.1) and the lower chord of the walls, as well as the floor profile, are undamaged. Damage can complicate assembly or make assembly impossible!
- Secure the overall kit against tipping over, as well as its individual module assemblies. These are stored on the pallet in the order they are required for construction. With extraction, first cut the red straps which secure a component in each case (see 1.2!).
- Provide **enough free surface** (min. 3 m) on both sides, as well as behind the vehicle, including the **required tools and equipment** (2.2).
- The ambient temperature for components, as well as adhesives and sealants must be at least 15°C.

Attention: The final strength of the sealant is reached after 24 hours at 20°C.

2.2 Required tools and equipment

Gather the following equipment before assembly:

- Tape measure (10 m)
- Precision compressed-air or cordless screwdriver (e.g. Fein Accutec ASM12-12)
- Screwdriver bit Tx 30 according to ISO 1173, hard and tough version, ¼" drive, min. 70 mm long (MH 170107), possibly + extension for screwdriver bits
- Torque wrench up to 200 Nm
- Carrying belts with double-stud fittings
- 10-/13-/17-/19 open-jaw spanner or ratchet and small ratchet with matching nuts, possibly impact screwdriver and extension
- Hammer (500 gr.), Punch/Mandrel d = 3 mm and d = 4 mm
- Air or manual mastic gun for 310 ml sealant cartridges
- 2x glue pliers for doors
- Rivet gun for rivet diameter 5 mm
- Crane, forklift
- 2 straight ladders or erection scaffolding
- HSS drill Ø 5.0 mm (shorter than the wall-thickness!)
- Commercial painter's spatula (blades approx. 50 mm wide)
- Small ratchet (1/4 inch with adapted screwdriver bit receptacle)
- Inside hexagonal wrench or nut size 5

2.3 Tightening torques of the screws

The settings for the screws must be checked by appropriate measuring equipment. The torques apply in case of dry screw thread. **Adjust the following tightening torque in each case:**

- | | |
|---|--------------|
| • assembly screw M 6 x 21 (MD 100224) | 10 Nm ± 1 Nm |
| • assembly screw M 6 x 25 (MD 100318) | 5 Nm ± 1 Nm |
| • Flat-head screw M 10 x 20 (MD 100332) | 52 Nm ± 5 Nm |
| • frame screw M 10 x 60 (MD 1003) | 65 Nm ± 2 Nm |
| • Substructure screw M 12 | 80 Nm ± 5 Nm |



Fig. 22



Fig. 23

3. Assembly of the kit

In case of the kit BR13x-3, the sub-structure and the floor are component part of the kit and must be assembled professionally.

3.1 Assembling of the longitudinal supports (sub-structure)

- Place both longitudinal supports with the vehicle-specific, pre-assembled brackets on the vehicle chassis. The V-Shaped section must point in the driver cab direction (Fig. 311) and the upper leg supports to outside.
- Align the longitudinal supports according to the **diagonal dimension y** and **hole separation dimension x**. Consider absolutely the measurement dependencies $x_1 = x_2$, as well as $y_1 = y_2$ (Fig. 312). The difference between the diagonals must not exceed 4 mm!



Fig. 311



Fig. 313

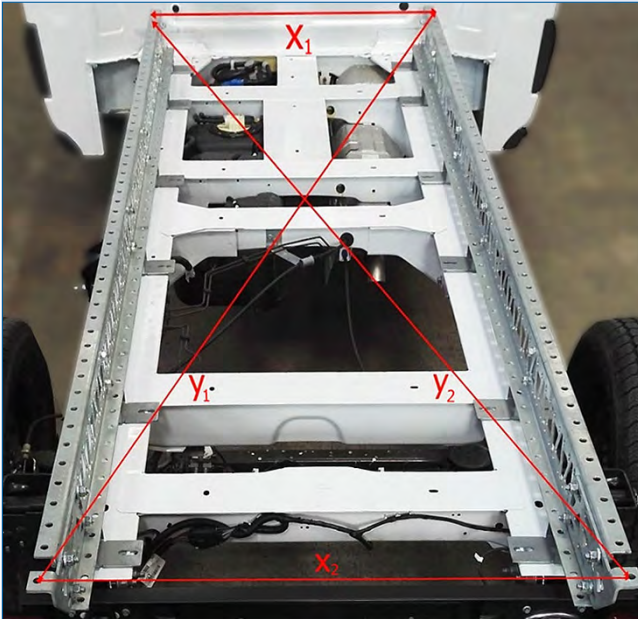


Fig. 312



Fig. 321

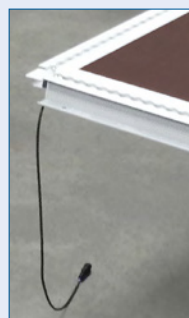


Fig. 323



Fig. 322

The supports should rest on the longitudinal stringers flush with the outer edge of the vehicle frame (Fig. 313) and keep the same separation distance to the driver cab in front in each case.

Attention: In case of iso-floor, the hole separation dimension x listed in the type sheet is to be adhered to absolutely!

Observe the construction and modification instructions of the respective chassis manufacturer, in particular the positioning and the type of connection of the substructure, flexible or rigid. At a minimum, the two front fastenings must be spring-supported. Otherwise forces occurring during driving (e.g. with cornering, load changes or uneven loading) are transferred to the structure. This can lead to cracks in the sub-structure and in the set-up structure. Possible adaptation work, such as e.g. bores, are the responsibility of the vehicle constructor.

- Now measure again and check the hole separation dimension x and the diagonal dimension y . If required, re-adjust. If the dimensions are consistent, first screw the front and rear brackets securely and after that the remaining brackets follow.

3.2 Assembling connection of floor and front wall

- Now place the floor onto the longitudinal supports (Fig. 321) by means of a crane and suitable belts with double-stud fittings (Fig. 321). **Latch the fittings into the integrated airline rail in the centre of gravity of the floor.** As an alternative, you can possibly use a forklift with sufficiently long prongs.
- A foam strip protects the side floor profile and the subordinate sealing cord. Now pull these strips carefully out in order not to damage the seal.
- Align the floor centrally to the longitudinal chassis beams and the driver cab. There must be a separation distance of approx. 1.20 m to the front wall, so that you can attach the front wall later (Fig. 322).



Danger: Toppling module assemblies endanger life and limb. Secure the floor against tilting and falling, where you fix it with four screws at the longitudinal supports.

- If the kit is equipped with side marking lights, a cable runs in front crossways within the floor. Ensure that the plug connectors hang down freely on the side (Fig. 323).



Fig. 324

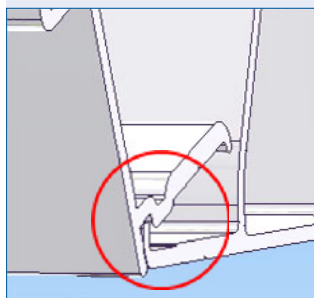


Fig. 325

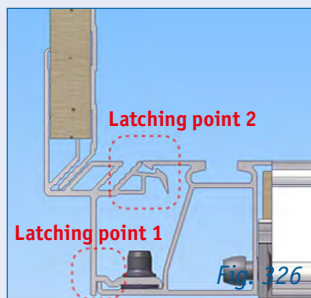


Fig. 326

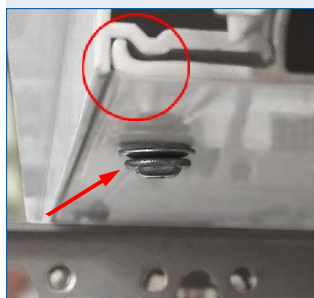


Fig. 327



Fig. 328

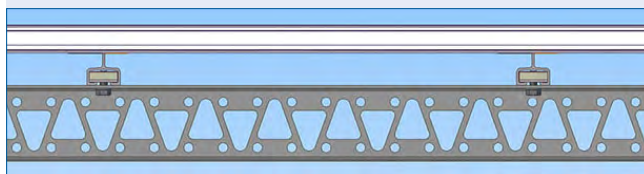


Fig. 329

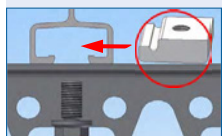


Fig. 3210

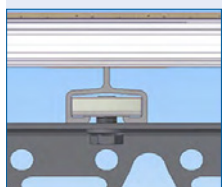


Fig. 3211

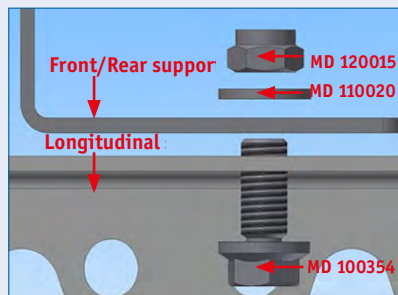


Fig. 3212

- Take the front wall from the transport unit with crane and lifting tackle or vacuum cross beam. Insert the wall with the lower chord diagonally into the floor profile at an angle of 10 - 15° (Fig. 324).



Danger: Crane-work involves hazards to life and limb. Never step under raised loads! Always wear a helmet. Lift loads only vertically and not diagonally! The suspension in the crane must always be above the centre of gravity of the assembly.

- Ensure that the front wall and the floor have a flush transition on the side (Fig. 325).

- Raise the front wall to the second or upper latch point and the "nose" latches into the floor profile clasps with a clearly audible noise ("click") (Fig. 326). Test visually whether the nose has engaged in the profile and whether a gap dimension still exists.

- **Danger:** Toppling module assemblies endanger life and limb. Screw the right and left two screws (MD 100318) into the rivet-down nuts so that the front wall does not topple over (Fig. 327). Check the side profile transition for flush finish.



- Then fix the front wall over the entire width with the delivered module assembly screws (MD 100318) and the gaskets (MD 110044). In difficult to access areas, use the small ratchet.

- Loosen the four floor screws fixed at the beginning and push floor and assembled front wall carefully to the driver cab up to reaching the parallel driver cab separation distance (Fig. 328). In order to place the module assembly centrally and to prevent a side misalignment of the floor, one fitter per vehicle side must push.

Danger: Protect the driver cab against damage with suitable means.

- Position the floor in longitudinal and transverse direction for the screwed connection with the longitudinal supports. In this case, the separation distance to the driver cab is to be adjusted in accordance with type sheet (parallel).

- Then measure the separation distance of the exterior frame of the floor to the longitudinal supports in front and behind as well as to the left and right, and adjust the dimensions.

According to floor variant, now proceed as follows:

- In case of a **standard module assembly with steel longitudinal supports** insert the supplied threaded plates into the cross beams and screw the longitudinal supports (Fig. 329-3212) with the floor using screws MD100354.

In so doing, insert the clamping claws into the cross beams, always with the nose toward the middle of the vehicle (Fig. 3211).

- On the front and rear support, implement the screwed connection in accordance with the exploded view (Fig. 3212).

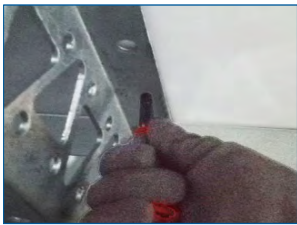


Fig. 3213



Fig. 3214

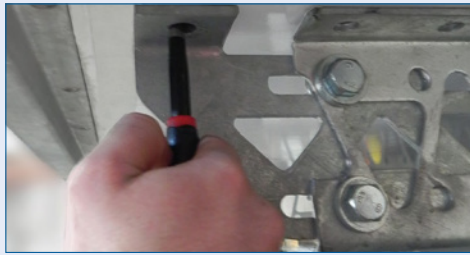


Fig. 3215

- Align an **iso-floor with steel longitudinal supports** so that the screw thread inserts in the floor are located over the elongated holes of the longitudinal supports (distance according to type sheet). The separation distance to the driver cab is absolutely to be adhered to.

Tip: Use a mandrel (Fig. 3213) in order to bring the bores of the longitudinal supports in line with those of the floor.

- Insert the screws MD100354 into the bores and screw them down with several turns of the thread. If they can be screwed down without impairment of the freedom of motion, tighten them crosswise with the required torque (Fig. 3214).
- Align the rear longitudinal support close-off to the hole pattern in the floor. Use a mandrel to check whether the hole pattern in the longitudinal support is in line with the bore in the floor (Fig. 3215).



Fig. 330a

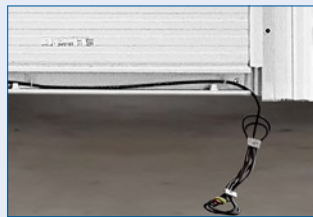


Fig. 330b



Fig. 331

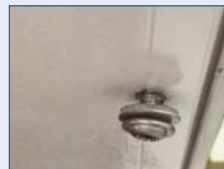


Fig. 332

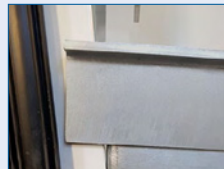


Fig. 333



Fig. 334



Fig. 335

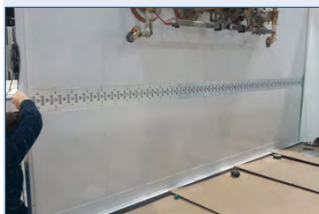


Fig. 336

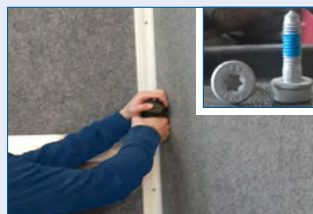


Fig. 337



Fig. 338



Fig. 339

3.3 Assembling of the side walls



- Lift with a suitable lifting aid (crane with appropriate hoisting gear, vacuum cross beam or lifting plate) the 1st side wall in the centre of gravity (Fig. 331). **Observe the safety instructions!**

Tip: It is best to fix the rear walls with glue pliers in order to prevent damage to the side wall.

- Ensure that no cables are present between connection points (danger of crushing of the cables). They must hang down freely on the beginning and end of the wall (Fig. 330 a/b).
- As with the front-side wall assembly, set the lower chord of the wall diagonally (approx. 10-15°C) into the floor profile (Fig. 331/324).
- Rotate the module assembly screws MD 100318 into the appropriate bores in order to fix the latching point (with MD 110044), and tighten them by several turns of the thread (Fig. 332). With the bedding of the side wall, the corner pillar touches the frame cross beam (Fig. 333). Further assembly is not hindered by this.

Attention: Before the raising of the side wall, the front wall should stand vertically and the corner pillar overlap the front-side wall panel.

- Raise the side wall up to the second latching point until it engages with a noise ("click") (Fig. 334/336).
- Visually check whether the nose has engaged in the profile and whether a clearance still exists, in particular in the side door area. Where appropriate, press down in order to ensure engagement. Once again, check for a flush line and gap dimensions (Fig. 334/327).
- The frame pillar should now fit flush with the frame cross beam and both are at right angle to each other below (Fig. 335). Now tighten the screws used at the beginning securely with the appropriate torque.
- In the interior of the box, fix all walls with the module assembly screws for the interior area MD 100224 (Fig. 337).

Attention: Unlike those for the outer area (MD100318), these screws have no gasket and are provided with a cylindrical head.



- Proceed with the assembly of the 2nd side wall just like with the 1st side wall (Fig. 338/339).



Fig. 341

Fig. 342

Fig. 343



Fig. 344

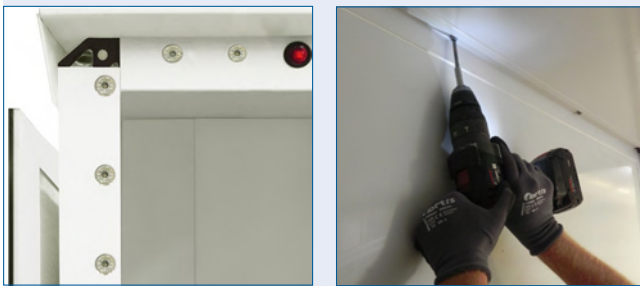


Fig. 345

Fig. 346

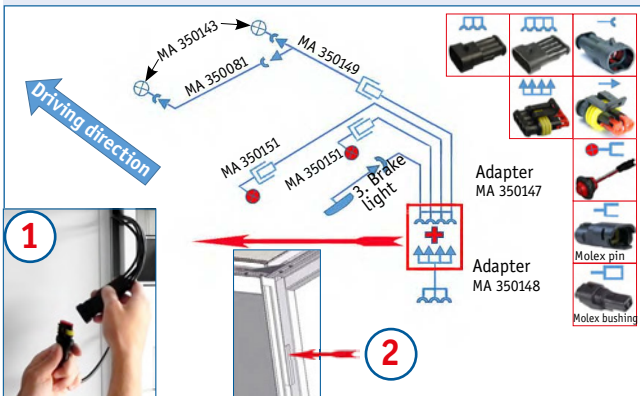


Fig. 351

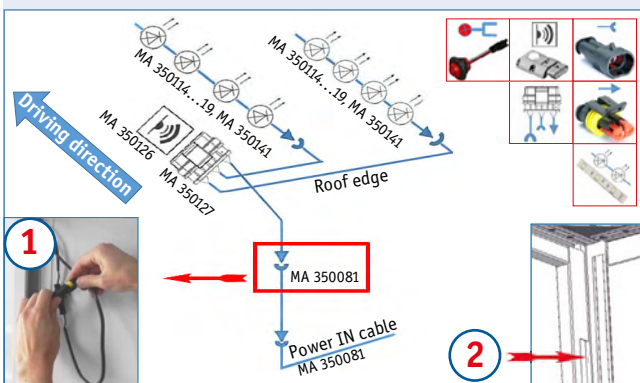



Fig. 352

3.4 Placement and fastening of the roof

- Push the upper frame nodes laterally into the roof edge. Fix these hand-tight with 2 flat-head screws M 10x20 MD 100332 each (Fig. 341).
-  Lift the roof with a crane or with of a vacuum cross beam over the transport lugs and carrying straps (Fig. 342/343). Set it down over the structure (Fig. 344).

Danger: Crane-work involves hazards to life and limb. Never step under raised loads! Wear a helmet. Lift loads only vertically and not diagonally! The suspension in the crane must be above the centre of gravity of the assembly.

- Keep the roof in the balance while an employee secures the centre of gravity of the component. Now carefully set the roof down beginning at the front on the front wall (Fig. 344).
- Centre the roof on the top boom of the front wall. The roof caps catch on the corner pillars. Align the roof with the wall profiles. Fix it to the front wall with screws distributed over the entire width.

Attention: The screws must not tilt and cable and plug not get squeezed!

- Lower the roof slowly. The tips of the frame nodes pointing down should be centred on the frame pillars. Fix the nodes in the pillars hand-tight with flat-head screws M 10 MD 100329 (Fig. 344/345).
- Screw the side wall/front wall to the roof with the module assembly screws MD 100224, until the required torque $10 \text{ Nm} \pm 1 \text{ Nm}$ is reached (Fig. 346).

3.5 Connection of the attached electrics

- The cable connections of the kits BR13x-3 can be mounted very simply as follows:

• For the cabling of the navigation lights and the third stop light, just connect 1. the plugs and slide 2. the plug connection (to the right) into the right frame pillar (Fig. 351).

Attention: The cables and connectors must not be crushed.

- Now connect the different lights and the reversing camera:

• For the cabling of the LED strips with motion detector (infrared sensor), just connect 1. the plugs and slide 2. the plug connection downward into the left frame pillar (Fig. 352).

Remark: The illustration indicates a cabling with LED strips on the right and left.

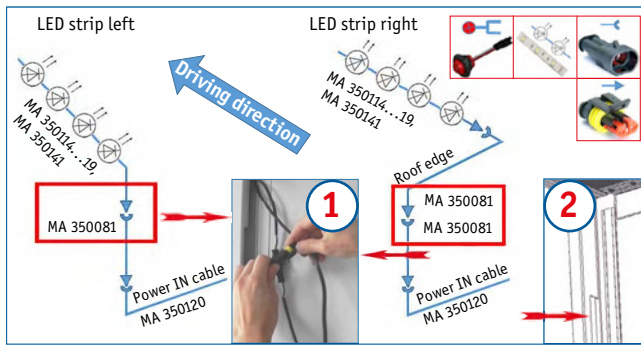


Fig. 353

- For the cabling of the LED strips **without** motion detectors (**infrared sensor**), just connect **1.** the plugs and slide **2.** the plug connection downward into the left frame pillar (Fig. 353).

Remark: The illustration indicates a cabling with LED strips on the right and left.

- For the cabling of the preassembled side marking lights (SML), just connect **1.** the plug on the left side with the connection cable in the floor profile and **2.** connect the plug on the right-hand side with this cable as well.

Now insert the plug connections no. **1** and **2** into the floor profile on the front or on the side (Fig. 354); see also 3.9 (Fig. 396).

- For the **reversing camera** MA 350172 or MA 350173, connect **1.** the camera cable in the frame pillar with that of the camera and slide the plug connection into the pillar (Fig. 355). Then **2.** route the cable MA 350174 into the driver cab in order to connect it to an external monitor or via an adapter cable to the vehicle display.

Attention: Be sure to follow the assembly instructions of the camera manufacturer, as well as the specifications of the chassis producer.

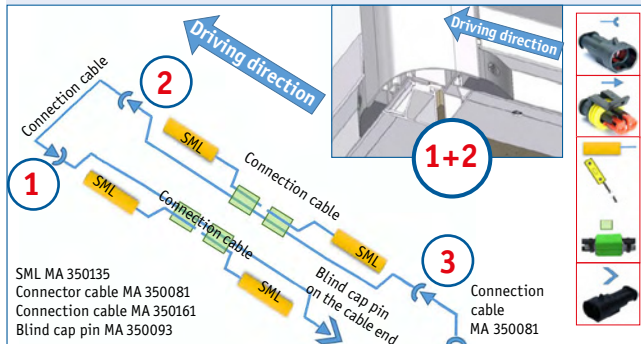


Fig. 354

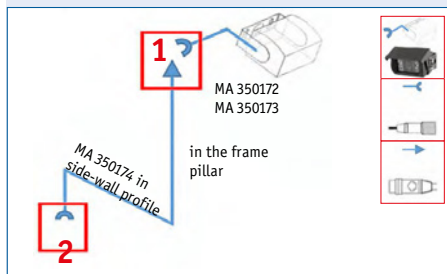


Fig. 355

3.6 Assembly of the frame, doors, top gate or sliding door

- Fix the lower cross beam from the outer side of the corner pillars each with 2 screws M 10 x 60 mm. Do not tighten the screws yet! Measure the diagonals of the frame and correct these as appropriate until they are in full alignment (Fig. 361).

- Tighten the screws of the frame nodes M 10 x 20 (MD 100332) and the bottom frame cross beam screws M 10 x 60 (MD 100328) with the correct torque (no impact screwdriver!). The cross beam and the rear surfaces of the pillars must be flush (Fig. 362).

- Take the fittings out of the roof assembly strips.

- Close the tailgate in order to check the fit accuracy. Set these up as appropriate, according to the door design, over the brace supports on the frame cross beams.

- Fix an upper flap to the frame using the holes provided in the hinge with the screws MD 100058. Then seal the transitions (Fig. 363). Take the gas pressure springs (piston rod must point down) and engage the spherical heads.

- In the case of a frame pillar with integrated seal, secure the flap against lateral displacement with the assembly screws **A** (Fig. 364).

- In the case of a frame pillar without integrated seal, secure the flap against lateral displacement with 2 brackets **B** (Fig. 365).

- Mount a sliding door according to the current instruction included with the assembly material for sliding doors.



Fig. 361



Fig. 362

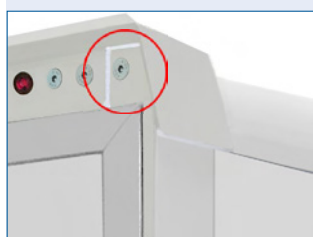


Fig. 363

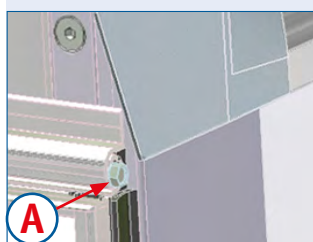


Fig. 364

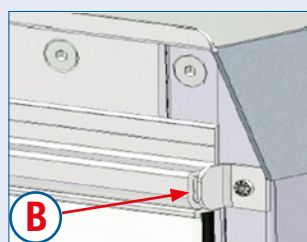


Fig. 365

3.7 Placement of the rear roof corners and sealing of the kit

- The ambient temperature for component parts, as well as adhesives and sealants, must be 15°C minimum.

Attention: The final strength of the sealant is reached after 24 hours at 20°C.

- Provide the contact surfaces of the rear roof corners (internal) with sealant on the side and top (*Fig. 371*).
- Place the corners onto the roof. Where appropriate, drill from above through the roof corners and the frame cross beam into the existing bores with a diameter of 5 mm. Please be sure to not damage existing cables.
- Place 2 blind rivets MD 150051 d = 5 mm (*Fig. 372*). Remove sealant mass leaking from the corners.
- Clean the sealing faces with the adhesive cleaner of the kit (*Fig. 373*).
- After approx. 5 minutes flash-off time, seal on the outside:
 - The front roof corners from below (*Fig. 374*),
 - The circumference of the rear roof corners (*Fig. 375*),
 - The roof edge connection and frame pillar at the upper end ,
 - The contact surfaces top right and left from the frame pillar to the frame cross beam,
 - The rivets fixing the roof corners from above (*Fig. 372*)
 - In each case, seal the vertical gap in the front wall between the lower chord and the two front corner pillars (*Fig. 376*) with the sealant included in the kit.
- Provide sealing in the interior of the box in the area of the frame cross beam and the front-side corners (*Fig. 377/378*).
- Smooth off all sealing using only polishing agent or water without soap additives.

3.8 Optional supplementary equipment

Unlike the model range 13x-2, we offer further additional options, such as the preassembled tail pull-out ladder or the reversing camera. Those options, which are described in the following, must still be attached however.

- In case of a tail LBW, you may need to refit the rear lights. With the **rear light brackets** (right-hand KM390010360R; left-hand KM390010360L), the lights can be assembled both horizontally and vertically. The brackets are pre-punched (*Fig. 381 / 382*) for the rear lights of usual vehicles.
- After the attachment of the LBW, mount the rear light bracket to the lower frame cross beam. The folded legs (*Fig. 382*) must point backwards, against the direction of travel (TD). A bevel serves for the screwed connection with the frame cross beam. The second bevel points toward the centre of the vehicle (VC) (*Fig. 381*).
- Fix the bracket with the hexagon socket M 10 x 30 (MD100227) and the washers (MD110002) to the frame cross beam (*Fig.382*).

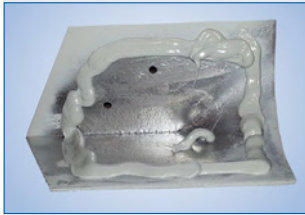


Fig. 371



Fig. 372



Fig. 373



Fig. 374



Fig. 375

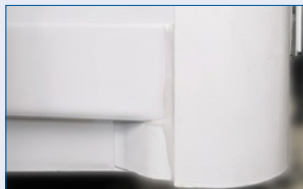


Fig. 376



Fig. 377

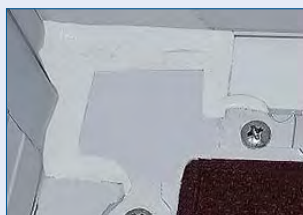


Fig. 378



Fig. 381

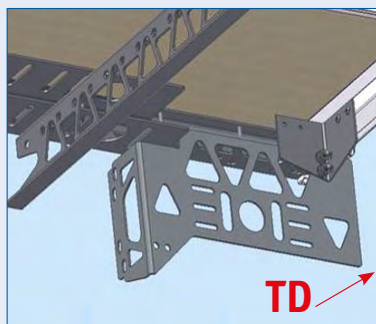


Fig. 382

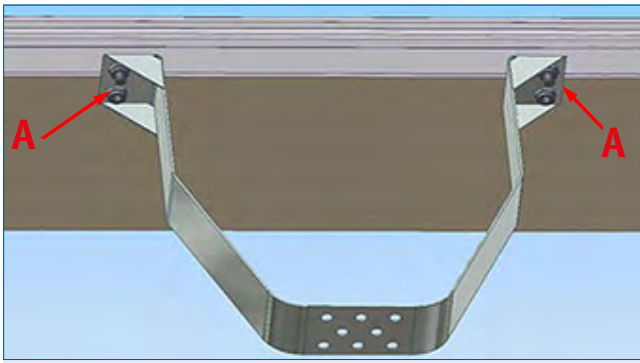


Fig. 383

- In case of the optionally supplied **side rise** MA 200373, first remove the nuts and washers **A** in the area of the side doors.
- Take the rise, fit it from below and screw it back with the washers and nuts. Tighten the nuts securely with the prescribed torque (Fig. 383).

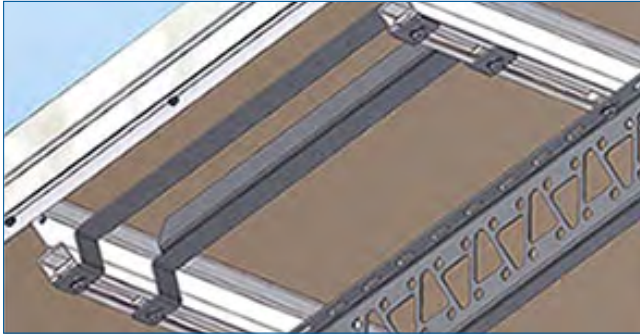


Fig. 384

- With the **fender bracket** option KS 320185, the brackets are pre-assembled to the sub-structure with cross beams (Fig. 384). Screw off the brackets. The threaded inserts remain in the cross beams.

- Use fenders with flat assembly surfaces (not included in the scope of delivery). Place the two parts of the brackets symmetrically in longitudinal and transverse direction to each other on the assembly surface of the fenders. The bevel must point upward.

- Use the holes in the brackets as a drill template and drill the fenders. Screw the components together with the screws MD 100265, washers MD 110001 & nuts MD 120001.



Fig. 385

- Secure the fender bracket with the threaded inserts MD 100354 and the screws removed at the beginning to the cross beams. Align the fenders centrally over the running-contact surface of the wheel. Check if the tyre can move freely and correct as appropriate, then tighten the screws with the appropriate torque (Fig. 385).



Fig. 391

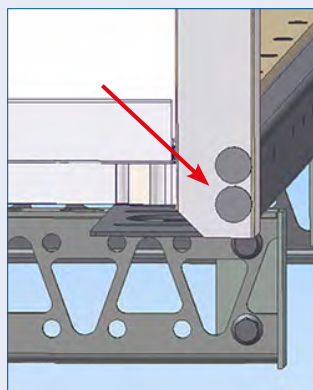


Fig. 392

3.9 Completion work

- Where appropriate, screw the hand grip to the inner right portion of the frame pillar (Fig. 391).

- Close the side screw holes on the rear pillar with the supplied plugs MA150001 (Fig. 392).



Fig. 393

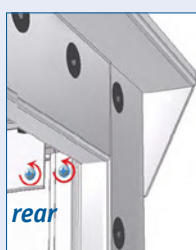


Fig. 394



Fig. 395

- According to wall-thickness, shorten the inside brackets MA100068/-69 at the markers. Arrange these according to the illustrations and fix with the screws MD100057. At the rear, any preassembled screws must be removed beforehand (Fig. 393-395).



Adapter cable	Suitable for motor vehicle type:
MA350158	MB Sprinter, VW Crafter, MAN TGE, Opel Movano, Renault Master, Citroen Jumper, Fiat Ducato, Peugeot Boxer
MA350159	Iveco Daily
MA350168	Ford Transit

Fig. 396



Attention: Paints, solvents and dusts endanger health. Protect yourself!

Fig. 397



Fig. 398



Fig. 399

- Pull out the connection cable for the interior lights at the bottom of the left frame pillar and connect to the vehicle electrics.

Attention: Follow the instructions of the vehicle manufacturers!

- Pull out the connection cable for the navigation lights and, if appropriate, the connection cable of the side marking lights at the bottom of the right frame pillar. Connect these connection cables to **the adapter cable** for the respective vehicle.
- Connect the vehicle-specific adapter cable with the rear light (Fig. 396).
- Check the roof corners, doors and the lighting for tightness e.g. by a water test for structures, following EN 283.

For this, direct a water jet from a ½" nozzle (Ø 12.5 mm inner diameter) at a pressure of over 1 bar onto the external sealed joints. Hold the nozzle at a distance of approx. 1.5 m from the structure. After the test, no water should have penetrated into the structure.

- You can generally paint over our coil coating and powder-coated parts with traditional wet paints. For a secure adhesion, get in touch with the paint supplier especially concerning the primer.

Untreated and zinc-coated profiles are to be treated with a suitable primer before painting. The temperature in the painting cubicle may not exceed 60°C.

- Pay attention in particular to the corrosion protection in case of subsequently attached component parts or modified AluTeam components. In particular, you must absolutely exclude contact corrosion through different materials (Fig. 398). Otherwise the guarantee on the painting, coating and bond is voided.

Note that the final strength of the sealant is reached, at the earliest, after 24 hours (at 20°C). The assembled box can be treated but not loaded.



Attention: You may only clean the structure with a steam cleaner after 6 weeks. Please absolutely consider the corresponding explanations under "4. Maintenance".

Stick-on labels related to the structure strength apply only in connection with a certificate issued by AluTeam (Fig. 399).

4. Maintenance



For the maintenance of the structure, check all screws are tight (also in case of sliding doors!) at regular intervals but at least once a year. Also check the prescribed torque in the process.

- Locks and closing cylinders are maintenance parts. They must be kept serviceable with lubricants when necessary. Locks seized due to poor maintenance are not a reason for complaint.



Clean the structure with a steam jet blower, at the earliest after 6 weeks. In order to avoid damage to the paint, keep nozzle at a minimum distance of approx. 300 mm. The maximum water temperature is 60°C, the maximum operating pressure is 100 bar, and the pH value of the cleaning agents is 4 - 10.

After that, flush immediately with sufficient amounts of clear water. Remove rust film on stainless-steel parts (including the frame) with normal household stainless steel cleaners.

- Treat all seals with a rubber care agent after every cleaning.

5. Service, Spare parts



In case of questions related to the assembly, our **Customer Service** will be glad to help you:

Tel: +49 (0)521-41 73 11-30, Email: m.wismueller@aluteam.de

If you require **spare parts**, please contact your responsible sales representative or call us at: +49 (0)521 - 41 73 11 - 10

Please send e-mails to: info@aluteam.de

6. Waste disposal of used boxes or component parts



- You can remove the metallic layers from the foam core and have them recycled together with aluminium via the scrap trade. The same applies to the steel and/or stainless steel components of the frames.
- A PUR foam core can be burned in thermal waste treatment systems without contaminating the environment. The energy contained in the insulation material is converted into primary energy in this case.
- Plywood, too, can be used to generate energy. Odour nuisance due to the ammonium additives in the binding agents are to be avoided. Generally, they can be burned as chipboard in wood furnaces with 50 kW minimum nominal thermal capacity. They are subject to significantly stricter carbon monoxide limit values than solid wood. Mostly, only automatically fed systems comply with these values.
- It is essential that you also consider the proper disposal of the foam in the floor area.










Tip: Information on this can be found in a leaflet published by the „Fachvereinigung Polystyrol - Extruderschäumstoff (FPX)“, Odenwaldring 68, 64380 Rossdorf (www.fpx-daemmstoffe.de).

7. Scope of delivery



Please understand that we must reserve the right to make changes to the scope of delivery with regard to form, equipment and technology.

Included in the scope of delivery of a kit BR13x-3:

- Fully assembled longitudinal supports with prepositioned brackets according to motor vehicle type
- Sub-structure hexagon screw M 12 with washer 3 mm MD 110020 and hexagon stop nut M 12 MD 120015
- Floor module assembly with airline rails, with pre-assembled door-stops and tail pull-out ladders as appropriate
- Module assembly screw self-locking 6 x 25 MD 100318 with gasket MD 110044 (connection floor / wall - external)
- Front wall module assembly
- 2 side-wall module assemblies right-hand and left-hand, incl. rear pillars, as appropriate with preassembled side marking lights, pre-assembled ramming buffer and attached doors according to the version
- Roof module assembly with integrated frame cross beam, including preassembled front roof corners and frame node MA 430124 as appropriate, with pre-ass. reversing camera MA 350172 or ..173 
- Rear roof corners MA 100060 
- Blind rivet MD 150027 for the riveting of the rear roof corners 
- For LBW kits: tail top gate with gas pressure spring and mounting screws MD 100058, and material to fix the flaps on the sides (depending on the type of flap)
- Inside bracket front and rear for 14/31 mm walls MA 100068 MA 100069.R / MA 100069.L including fastening screws / MD 100057 
- Module assembly screw M 6 x 21.5 self-locking, geomet-coated MD 100224 
- Flat-head screws 10 x 20 with hexagon socket MD 100329 - connection aluminium pillars to roof 
- Cylinder-head screw M 10 x 60 MD 100328 for connection of the aluminium pillars to bottom of the frame cross beam 
- Seal plug for screwed connection bores in the frame pillars MA 150001 
- Hand grip MA 200152 with self-drilling fastening screws 4.8 x 16 mm geomet-coated MD 100167 
- 1-component sealant and adhesive, AluSeal traffic-white MA 310115
- Adhesive cleaner Sika Activator / Cleaner 205 MH 240068
- According to the version, matching adapter cable for connection of the electrics to the rear lights
- Paper tissues
- Stick-on label with structure number
- Assembly instructions
- **Further options:**
 - Side rise MA 200373
 - Rain water deflector (for side door)
 - Preassembled fender bracket KS 320185
 - Rear-light bracket KM 390010360L or KM 390010360R
 - Stick-on label "Tested freight protection"

Attention: The stick-on label is only valid with a certificate issued by AluTeam!