# Wheel-loader
## Caterpillar 966G
### Series II

*Art.-No.* ***3100***

***Dear modelling enthusiast!***

We are glad that you have decided on one of the precious **WEDICO** truck models! For the manufacture of individual parts **WEDICO** uses durable materials of high quality - rarely to find in these days. This guarantees durability and enjoyment of your model for years to come.

If you should ever require replacement parts, please get in touch with your dealer or directly with **WEDICO**. For order purpose it is important using not only those EDP-numbers mentioned within the general parts list but also indicating the necessary details concerning colour, quantity and exact term of the spares required. Please note that any type of spares for this wheel-loader model can be supplied only if you have returned to us the registration card included with this kit.

Enjoy the assembly!

Your **WEDICO**-Team

**Tip:** The make-up of this instruction allows putting together your own booklet if you wish so. For this purpose you have to fold and stick the pages as follows:

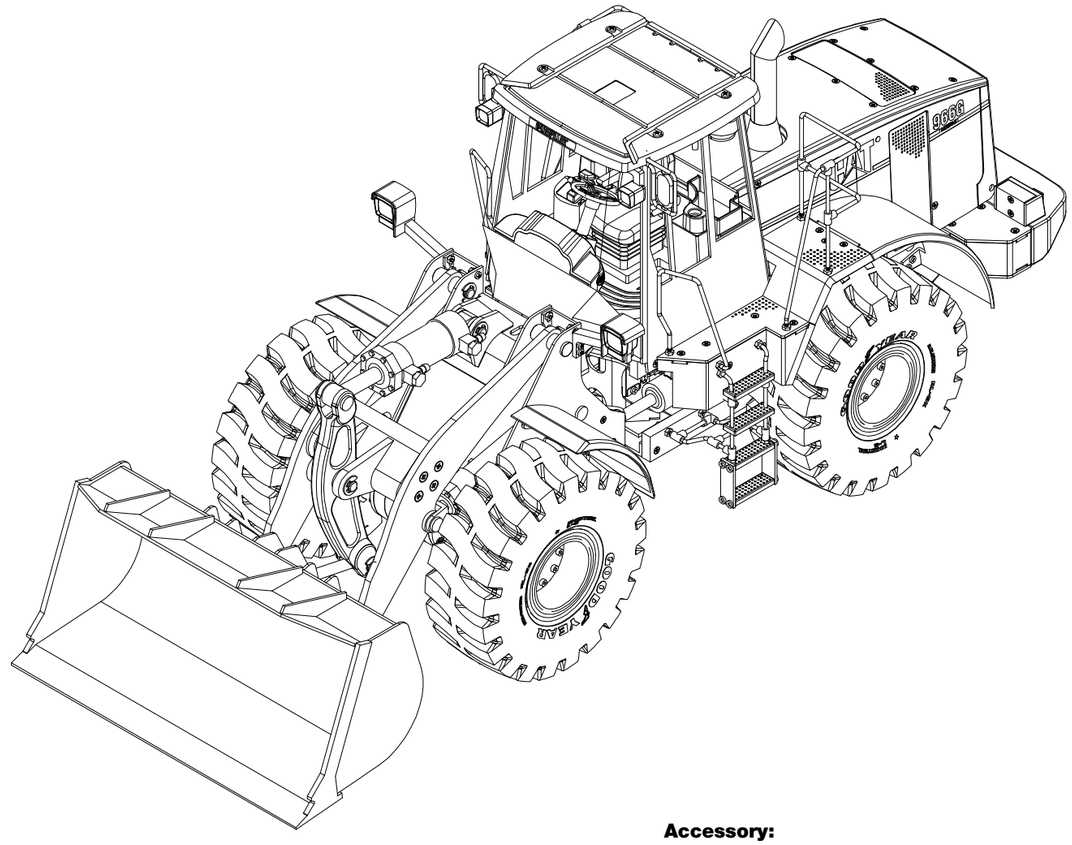
1. Turn round the **first page** with the **English text facing downwards**, and lay **the next page** on top of the first, with the **English text facing upwards**.
2. Glue the two pages together at the left outer edge (e.g. using adhesive tip) and fold the top page across to the left (with the fold vertically in the middle).
3. Lay the **next page** on top of the previous one with the **English text facing upwards**, stick the left outer edges and fold over to the left again as before. Similarly add remaining pages.
4. Finally glue together all pages at the inner edges, too, and fold **the original page over as a cover**, sticking it firmly at the left hand edge.

## Technical description

| | |
|---|---|
| **Measurements (bucket at bottom position)** | Length ..... 612 mm<br>Width ..... 211 mm<br>Height ..... 250 mm<br>Track (tread) ..... 158 mm<br>Weight (Static model) .....5.3 kg<br>Weight (Driving model) .....7.7 kg |
| **Finish** | Extremely hard epoxy powder coating; original Caterpillar colour. Excellent base when repainting for special purposes. |
| **Superstructure** | All superstructure components made are made from aluminium sheet panels, or from aluminium die-cast of 1.5 to 2.5mm thickness. Main frame made from 6mm thick aluminium sheet plane. The bumper is made from zinc die-cast. Fastening components made of stainless steel. Cab including true-to-original trim.<br>True-to-original tyres made of soft rubber with reproduction of original tread pattern. Front and rear wheels run in the same track. Pendulous rear axle, and rigid front axle fixed to the front carriage.<br>Nearly all of the individual parts are screwed. This kit model may be dismounted and reassembled again. |
| **Drive** | WEDICO-Bühler electric motor, rated 12 volts, 7-segment collector. Idling speed 6000 rpm.<br>Torque 5 Ncm (approx. 500 pcm) at 4000 rpm. Power drawn under load at maximum torque approx. 3A. Current drawing at idle running with connected gear and two differentials approx. 0.5A. |
| **3-speed gearbox "All-Wheel"** | 3-speed gearbox with long-time greasing, helical gearing technique, 14 ball bearings, gear wheels and housing made from metal.<br>Reduction ratio 12:1 / 6:1 / 3:1. |
| **Drive train** | Front and rear driving axles are made from metal, including partially lockable differentials. Gearbox manufactured as planetary construction; reduction ratio 15:1.<br>Stainless steel drive shaft with cardan joints between gear and front axle differential; also, cardan joints between gear and rear axle differential. |
| **Hydraulics** | Hydraulic valves provided for the functions of lifting and lowering of the boom, dumping and lifting of the bucket as well as steering to the right and left-hand side. |
| **Servos recommended** | Multiplex MS-X2 for the gear.<br>Graupner GR C2081 for the hydraulics. |

**Options:**

| | |
|---|---|
| ***Set of Hydraulics, Art.-No. 3101*** | *including the hydraulic pump plus oil filter, 3-fold control valve incl. the electrics, hoses plus small parts, and one bottle of oil.* |
| ***Set of Electrics, Art.-No. 3102*** | *including the electrical system, all-wheel 3 speed gearbox, electric motor 12V, NiMh battery pack 12V, 2.7 Ah, speed controller incl. the sound module plus loudspeaker.* |




**Accessory:**

*Touch Up Paint, 50ml-bottle .....Art.-No. 2015*

S-3100-0

## General notes

Please follow the steps of assembly accordingly to the instructions. Each single assembly step is described and illustrated, and furthermore does the ***parts lists*** indicate the required components for the actual construc

tion step. Carefully observe the notes explaining the various steps of assembly and use only those parts which are provided. This will insure a correct result of assembly.

For easier identification of different screws and washers, on this page we are adding an illustration of the ***most important parts at original scale***. Not illustrated parts are to be identified by comparing the proportion.

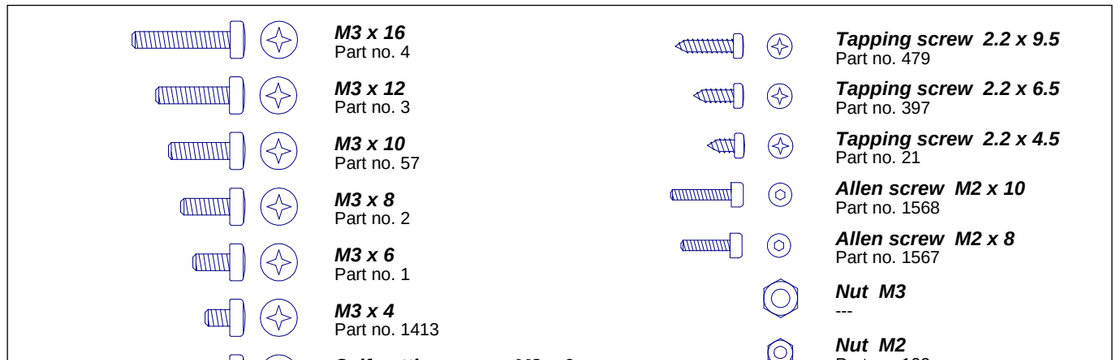
Additionally, on the right side of this page you find a complete list including each single item. Some of the small parts are packed in a higher number of pieces than necessary.

***M3 hex nuts*** are not provided with an identification number. It is the static model version only which is generally shown in the illustration. Components shown in the illustration but making part of the accessory sets of either the Hydraulics or the Electrics, are specially marked by broken lines and provided with special notes. The illustrations do not always include all the before-hand mounted parts if these are not belonging to the actual assembly step.

In order to join those components not to be screwed, use a customary all-purpose glue.

For screws to be screwed directly into plastic parts: Before you start mounting the plastic components, first cut the necessary threadings with help of the screw provided for this purpose.

***Screws, washers, etc. at scale 1:1***



***M3 x 16***
Part no. 4

***M3 x 12***
Part no. 3

***M3 x 10***
Part no. 57

***M3 x 8***
Part no. 2

***M3 x 6***
Part no. 1

***M3 x 4***
Part no. 1413

***Self-cutting screw M3 x 6***
Part no. 10

***M2 x 12***
Part no. 743

***M2 x 10***
Part no. 333

***M2 x 8***
Part no. 115

***M2 x 6***
Part no. 114

***M2 x 5***
Part no. 742

***M2 x 4***
Part no. 741

***Countersunk screw M3 x 30***
Part no. 1174

***Countersunk screw M3 x 16***
Part no. 647

***Countersunk screw M3 x 12***
Part no. 65

***Countersunk screw M3 x 10***
*Part no. 965*

***Countersunk screw M3 x 8***
Part no. 355

***Countersunk screw M2 x 10***
Part no. 1260

***Countersunk screw M2 x 8***
Part no. 907

***Countersunk screw M2 x 6***
Part no. 776

***Countersunk screw M2 x 5***
Part no. 926

***Countersunk screw M2 x 4***
Part no. 1577

***Tapping screw 2.2 x 9.5***
Part no. 479

***Tapping screw 2.2 x 6.5***
Part no. 397

***Tapping screw 2.2 x 4.5***
Part no. 21

***Allen screw M2 x 10***
Part no. 1568

***Allen screw M2 x 8***
Part no. 1567

***Nut M3***
---

***Nut M2***
Part no. 109

***Stop nut M3***
Part no. 908

***Washer 6.1 x 12 x 2***
Part no. 141

***Washer 2.2***
Part no. 24

***Washer 3.2***
Part no. 13

***Serrated washer 3.2***
Part no. 15

***Serrated washer 2.2***
Part no. 1229

***Retaining washer 5***
***Part no. 1566***

***Retaining washer 2.3***
Part no. 748

***Complete list of parts necessary for the assembly of Art.-No. 3100*** *(please use EDP-number when ordering spare parts)*

| Qty. | No. | Assembly part | EDP-No. |
|---|---|---|---|
| 26 | --- | Nut M3 | 20040 |
| 2 | 2 | Screw M3 x 8 | 20018 |
| 8 | 3 | Screw M3 x 12 | 20022 |
| 2 | 10 | Self-cutting screw M3 x 6 | 20222 |
| 4 | 13 | Washer 3.2 | 20046 |
| 4 | 15 | Serrated washer 3.2 | 20054 |
| 3 | 21 | Tapping screw 2.2 x 4.5 | 20052 |
| 2 | 24 | Washer 2.2 | 21210 |
| 2 | 57 | Screw M3 x 10 | 20020 |
| 12 | 65 | Counters. screw M3 x 12 | 20032 |
| 195 | 109 | Nut M2 | 21208 |
| 24 | 114 | Screw M2 x 6 | 21268 |
| 8 | 115 | Screw M2 x 8 | 21269 |
| 6 | 141 | Washer 6.1 x 12 x 2 (PA) | 20050 |
| 7 | 333 | Screw M2 x 10 | 26902 |
| 8 | 355 | Counters. screw M3 x 8 | 20030 |
| 9 | 397 | Tapping screw 2.2 x 6.5 | 23690 |
| 4 | 479 | Tapping screw 2.2 x 9.5 | 24868 |
| 2 | 574 | Mirror foil | 20366 |
| 4 | 647 | Counters. screw M3 x 16 | 25742 |
| 38 | 741 | Screw M2 x 4 | 26236 |
| 22 | 742 | Screw M2 x 5 | 26238 |
| 12 | 743 | Screw M2 x 12 | 26240 |
| 6 | 748 | Retaining washer 2.3 | 21838 |
| 12 | 776 | Counters. screw M2 x 6 | 26248 |
| 8 | 907 | Counters. screw M2 x 8 | 26688 |
| 2 | 908 | Stop nut M3 | 30568 |
| 77 | 926 | Counters. screw M2 x 5 | 25224 |
| 1 | 1172 | Allen wrench 1.5 | 30735 |
| 8 | 1229 | Serrated washer 2.2 | 28268 |
| 18 | 1260 | Counters. screw M2 x 10 | 28576 |
| 1 | 1414 | Frame -lh-, yellow | 29884 |
| 1 | 1415 | Frame -rh-, yellow | 29886 |
| 1 | 1416 | Floor plate, hind carriage, yellow | 29888 |
| 1 | 1417 | Base for floor plate, yellow | 29890 |
| 1 | 1418 | Front plate, hind carriage, yellow | 29892 |
| 1 | 1419 | Cross member, hind carriage, centre, yellow | 29894 |
| 1 | 1420 | Cross member, hind carriage, top, yellow | 29896 |
| 2 | 1421 | Support for steering cylinder, rear, yellow | 29898 |
| 2 | 1423 | Carrier for cab and entrances, yellow | 29900 |
| 4 | 1424 | Angle for pivot bearing | 29602 |
| 1 | 1425 | Bumper, yellow | 29902 |
| 1 | 1426 | Support f. box, -rh-, yellow | 29904 |
| 1 | 1427 | Housing f. box, -rh-, yellow | 29906 |
| 1 | 1428 | Cover for box, -rh-, yellow | 29908 |
| 1 | 1429 | Support f. box, -lh-, yellow | 29910 |
| 1 | 1430 | Housing f. box, -lh-, yellow | 29912 |
| 1 | 1431 | Support for ladder, rear, -rh-, yellow | 29914 |
| 1 | 1432 | Cover for support, yellow | 29916 |
| 1 | 1433 | Lamp support, rear -lh- | 29596 |
| 1 | 1434 | Lamp housing, rear -lh- | 29598 |
| 1 | 1435 | Lamp support, rear -rh- | 29528 |
| 1 | 1436 | Lamp housing, rear -rh- | 29530 |
| 4 | 1437 | Lens, rear, small | 29532 |
| 2 | 1438 | Lens, rear, big | 29534 |
| 1 | 1439 | Battery box | 29918 |
| 2 | 1440 | Support f. batt. box, yellow | 29920 |
| 1 | 1441 | Hood, side, -rh-, yellow | 29922 |
| 1 | 1442 | Hood, side, -lh-, yellow | 29924 |
| 1 | 1443 | Cover, radiator grille | 29614 |
| 1 | 1444 | Radiator grille | 29616 |
| 1 | 1445 | Ventilation grid, hood, -rh- | 29618 |
| 1 | 1446 | Ventilation grid, hood, -lh- | 29620 |
| 1 | 1447 | Squeezing device, -rh- | 29622 |
| 1 | 1448 | Squeezing device, -lh- | 29624 |
| 1 | 1449 | Hood, upper part, yellow | 29926 |
| 1 | 1450 | Ventilation grid, hood, top | 29628 |
| 1 | 1451 | Carrier, exhaust equipment + air filter, yellow | 29928 |
| 2 | 1452 | Base for exhaust | 29632 |
| 1 | 1453 | Exhaust half, -rh- | 29634 |
| 2 | 1454 | Exhaust half, -lh- | 29636 |
| 1 | 1455 | Air filter half, -rh- | 29638 |
| 1 | 1456 | Air filter half, -lh- | 29640 |
| 1 | 1457 | Mounting plate, hydraulics/electrics | 29644 |
| 1 | 1458 | Hinge shaft for hood | 29646 |
| 1 | 1461 | Ladder bow, rear, black | 29930 |
| 4 | 1462 | Step with lateral holes | 29654 |
| 1 | 1463 | Ladder frame, front, -rh- | 29656 |
| 2 | 1464 | Ladder frame, rear | 29658 |
| 4 | 1465 | Step with top holes | 29660 |
| 1 | 1466 | Step with fixing links | 29662 |
| 4 | 1467 | Side metal sheet for steps, black | 29932 |
| 4 | 1468 | T-piece, closed | 29666 |
| 1 | 1469 | Ladder frame, front, -lh- | 29668 |
| 1 | 1470 | Step with top + lateral holes | 29670 |
| 2 | 1471 | Supporting frame | 29672 |
| 2 | 1472 | Step | 29674 |
| 12 | 1473 | T-piece, open | 29676 |
| 2 | 1474 | Handrail, rear | 29678 |
| 2 | 1475 | Railing post | 29680 |
| 1 | 1476 | Railing frame, -lh- | 29682 |
| 2 | 1477 | Centre frame | 29684 |
| 1 | 1478 | Railing frame, -rh- | 29686 |
| 1 | 1479 | Handrail, front, -lh- | 29688 |
| 1 | 1480 | Stepboard, -lh-, yellow | 29964 |
| 1 | 1481 | Fender, rear, -lh-, yellow | 29966 |
| 1 | 1482 | Protection plate for ladder, -lh-, yellow | 29968 |
| 1 | 1483 | Handrail, front, -rh- | 29698 |
| 1 | 1484 | Stepboard, -rh-, yellow | 29970 |
| 1 | 1485 | Fender, rear, -rh-, yellow | 29972 |
| 1 | 1486 | Protection plate for ladder, -rh-, yellow | 29974 |
| 1 | 1487 | Tank housing, yellow | 29976 |
| 1 | 1488 | Tank side, inside, yellow | 29978 |
| 1 | 1489 | Tank tube | 29708 |
| 1 | 1490 | Cover for tank tube | 29710 |
| 1 | 1491 | Bucket, yellow | 30012 |
| 1 | 1492 | Central beam, yellow | 30014 |
| 1 | 1493 | Connecting rod, yellow | 30016 |
| 2 | 1494 | Joint bolt ∅6 x 20.8 | 29718 |
| 2 | 1495 | Joint bolt ∅6 x 18.5 | 29720 |
| 2 | 1496 | Bucket arm, yellow | 29980 |
| 1 | 1497 | Central carrier, bucket arm, yellow | 30018 |
| 5 | 1498 | Joint bolt ∅6 x 26.2 | 29726 |
| 1 | 1499 | Central unit, front carriage, yellow | 29982 |
| 1 | 1500 | Side plate, inside, -lh-, yellow | 29984 |
| 1 | 1501 | Side plate, inside, -rh-, yellow | 29986 |
| 1 | 1502 | Support for tilting cylinder, yellow | 29988 |
| 1 | 1503 | Plate for turning knuckle, yellow | 29990 |
| 1 | 1504 | Side plate, outside, -lh-, yellow | 29992 |
| 1 | 1505 | Side plate, outside, -rh-, yellow | 29994 |
| 2 | 1506 | Carrier for side plates, yellow | 29996 |
| 2 | 1507 | Fender, front, yellow | 29998 |
| 1 | 1508 | Joint bolt ∅6 x 21.6 | 30036 |
| 2 | 1509 | Support for steering cylinder, front, yellow | 30000 |
| 1 | 1510 | Floor plate, front carriage, yellow | 30002 |
| 1 | 1511 | Cross member, front carriage, bottom, yellow | 30004 |
| 1 | 1512 | Lamp support, front, -lh- | 29754 |
| 1 | 1513 | Lamp support, front, -rh- | 29756 |
| 2 | 1514 | Lamp housing, front | 29758 |
| 2 | 1515 | Lamp frame, front | 29760 |
| 2 | 1516 | Lens, front, small | 29768 |
| 2 | 1517 | Lens, front, big | 29770 |
| 2 | 1518 | Cable cover, lamp support, front | 29772 |
| 2 | 1519 | Plate for bulb wire, yellow | 30006 |
| 1 | 1520 | Cover for centre unit, front carriage, yellow | 30008 |
| 4 | 1521 | Bearing bush, bucket arm | 29778 |
| 3 | 1522 | Joint bolt ∅6x15.1mm | 29780 |
| 3 | 1523 | Bearing socket, turning knuckle top | 29782 |
| 2 | 1524 | Joint bolt ∅6 x 22.8 | 30038 |
| 4 | 1525 | Joint bolt ∅4 x 12.7 | 29786 |
| 1 | 1526 | Cab floor, top | 29788 |
| 1 | 1527 | Base for seat | 29790 |
| 1 | 1528 | Armrest | 29792 |
| 1 | 1529 | Seat | 29794 |
| 1 | 1530 | Seat upholstery | 29796 |
| 1 | 1531 | Dashboard | 29798 |
| 1 | 1532 | Tilting control lever | 29800 |
| 1 | 1533 | Lifting control lever | 29802 |
| 1 | 1534 | Wrist rest | 29804 |
| 1 | 1535 | Steering wheel | 29806 |
| 1 | 1536 | Cab floor, bottom | 29808 |
| 1 | 1537 | Glass cab | 29810 |
| 1 | 1538 | Metal cab | 30038 |
| 1 | 1539 | Rear mirror, -rh- | 29814 |
| 1 | 1540 | Rear mirror, -lh- | 29816 |
| 1 | 1541 | Lamp support, cab, -rh- | 29818 |
| 1 | 1542 | Lamp support, cab, -lh- | 29820 |
| 2 | 1543 | Lamp frame, cab | 29822 |
| 2 | 1544 | Cable cover, lamp support/cab | 29824 |
| 2 | 1545 | Lens, cab | 29826 |
| 1 | 1546 | Roof, cab, yellow | 30020 |
| 2 | 1550 | Pivot bearing | 29448 |
| 1 | 1553 | Rear axle diff, CAT | 29948 |
| 1 | 1554 | Front axle diff, CAT | 30028 |
| 2 | 1555 | Lifting cylinder, yellow | 29868 |
| 1 | 1556 | Tilting cylinder, yellow | 29870 |
| 2 | 1557 | Steering cylinder, yellow | 29872 |
| 8 | 1558 | Rim, CAT , yellow | 29860 |
| 4 | 1559 | Bushing for rim | 29484 |
| 4 | 1561 | Tyre "Goodyear" | 29334 |
| 15 | 1566 | Retaining washer 5 | 22898 |
| 40 | 1568 | Allen screw M2 x 10 | 29834 |
| 8 | 1577 | Counters. screw M2 x 4 | 29846 |
| 1 | --- | Decal CATERPILLAR | 29934 |

# 1 Assembly of the hind carriage

## 1.1 Mounting the centre frame

Start by fixing the floor plate **1416**: use each five countersunk screws **1260** and nuts **109** to fix it to the left-hand frame side **1414** and to the right-hand frame side **1415**. With screws **114** and nuts **109** attach now the front plate **1418** onto the base **1417**, and afterwards the base itself onto the floor plate; for this purpose use screws **114**, countersunk screws **776** and nuts **109**.

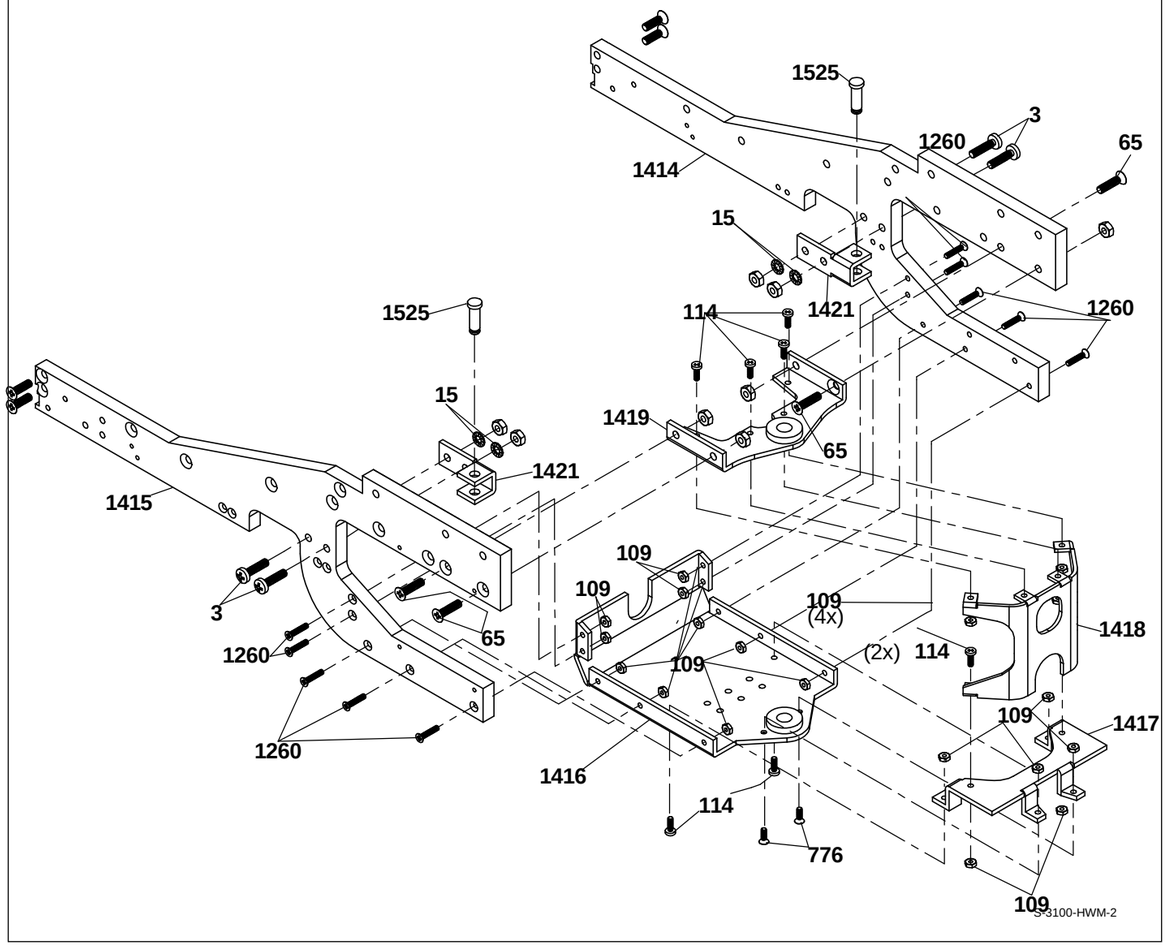
Fix the centre cross member **1419** as follows: With screws **114** and nuts **109** onto the front panel, and with countersunk screws **65** and nuts M3 onto the left- and right-hand frame side.

Insert one each joint bolt **1525** to the supports **1421** (serving for the steering cylinders). Afterwards use screws **3** and serrated washers **15** to fix the supports onto the inner side of the frame (see drawing).

*Assembly step 1.1*

| Qty. | No. | Assembly part |
|---|---|---|
| 8 | --- | Nut M3 |
| 4 | **3** | Screw M3 x 12 |
| 4 | **15** | Serrated washer 3.2 |
| 4 | **65** | Countersunk screw M3 x 12 |
| 20 | **109** | Nut M2 |
| 8 | **114** | Screw M2 x 6 |
| 2 | **776** | Countersunk screw M2 x 6 |
| 10 | **1260** | Countersunk screw M2 x 10 |
| 1 | **1414** | Frame -lh- |
| 1 | **1415** | Frame -rh- |
| 1 | **1416** | Floor plate, hind carriage |
| 1 | **1417** | Base for floor plate |
| 1 | **1418** | Front plate, hind carriage |
| 1 | **1419** | Cross member, hind carriage, centre |
| 2 | **1421** | Support for steering cylinder, rear |
| 2 | **1525** | Joint bolt ∅4 x 12.7 |

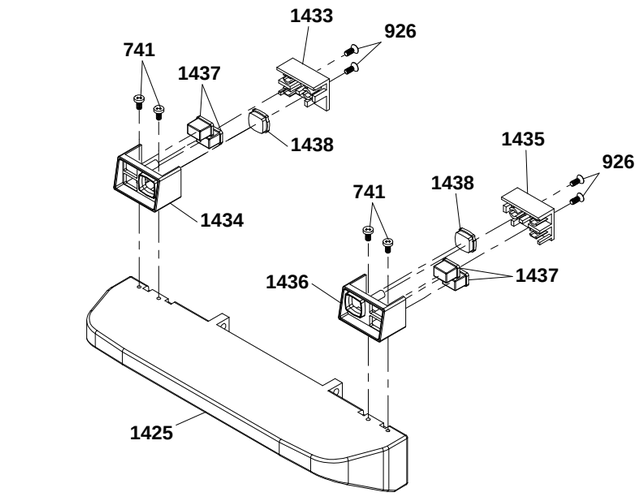
**1525** M 1:1




*Assembly step 1.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 4 | **741** | Screw M2 x 4 |
| 4 | **926** | Countersunk screw M2 x 5 |
| 1 | **1425** | Bumper |
| 1 | **1433** | Lamp support, rear -lh- |
| 1 | **1434** | Lamp housing, rear -lh- |
| 1 | **1435** | Lamp support, rear -rh- |
| 1 | **1436** | Lamp housing, rear -rh- |
| 4 | **1437** | Lens, rear, small |
| 2 | **1438** | Lens, rear, big |
| 6 | **1562** | ∗ Bulb 5V |

∗ *included in Art. 3102*




S-3100-HWH-1

## 1.2 Mounting the lamps onto the bumper

➔ ***When installing the Set of Electrics, Art.-No. 3102:*** First insert the bulbs **1562** into the lamp supports. For this purpose carefully bend the wire behind the bulb lens by 90 degrees. Test the bulb function before you start embedding the cable itself. Please be careful not to squeeze the bulb wires as this may cause a short circuit.

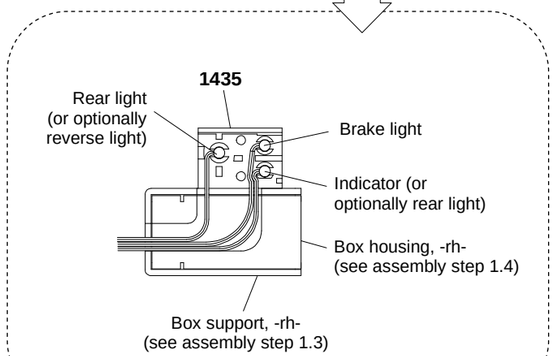
Please decide yourself which way of bulb connection you will prefer. If you have selected the version which includes the indicators, each blink pulse has to be given via the remote control equipment.

Dye the lamp lenses as preferred, either in red, or in orange colour; for this purpose you may use for instance a so-called "Permanent Marker".

At their upper side, the big lamp lenses **1438** show a small sparing to match the upper bushing inside the lamp housing. When inserting the lenses please pay attention to their correct position. Now, start equipping the right-hand lamp housing **1436** and the left lamp housing **1434** with the big lamp lenses and the small lamp lenses **1437**; use a bit of glue to fix the lenses onto the housing.

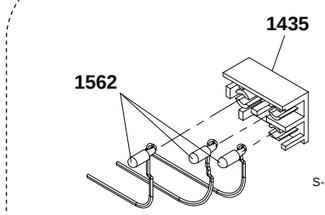
With screws **741** mount then the lamp housings onto the bumper **1425**. Behind the lamp housings set the lamp supports: lamp support **1433** to the left-hand side, lamp support **1435** to the right-hand side. Fix the supports using screws **926**.

***Set of Electrics, Art.-No. 3102***




S-3100-HWH-3

***Set of Electrics, Art.-No. 3102***




S-3100-HWH-2

**Inserting the bulbs**

## 1.3 Components belonging to the centre frame

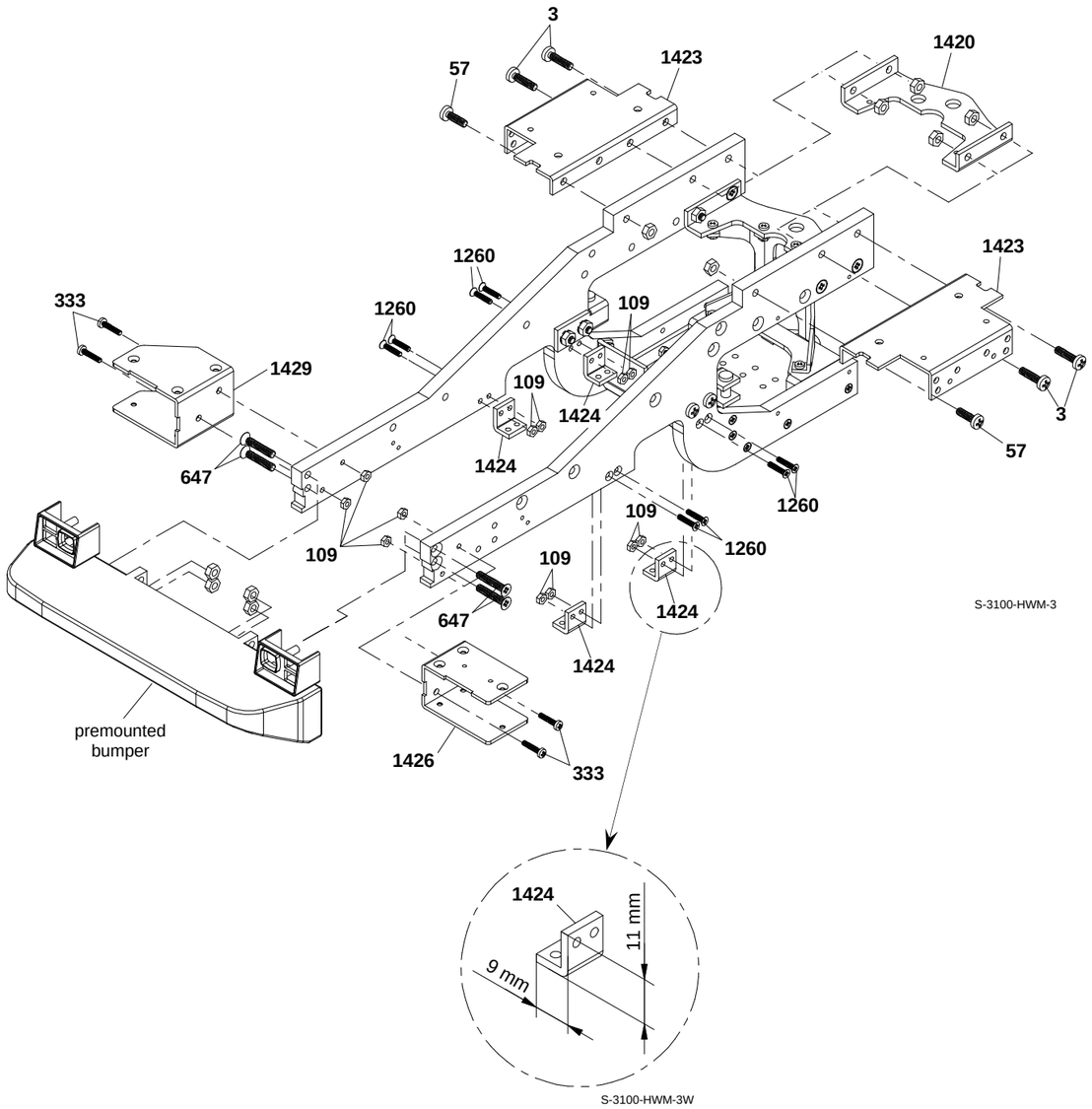
Along with both carriers provided for the cab and the entrances **1423**, mount the upper crossmember **1420** between both frames. For this purpose use screws **3** and nuts M3. Additionally fix the carriers for the cab and entrances with each one screw **57** and nut M3 onto the frame. Now, mount the angles for the pivot bearings **1424** with countersunk screws **1260** and nuts **109** onto the inner frame side.

Fix the premounted bumper with countersunk screws **647** and nuts M3 onto the rear of the frame.

Finally use screws **333** and nuts **109** to fix the box support **1426** to the right-hand frame, and then the box support **1429** to the left-hand frame.

*Assembly step 1.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 10 | --- | Nut M3 |
| 4 | **3** | Screw M3 x 12 |
| 2 | **57** | Screw M3 x 10 |
| 12 | **109** | Nut M2 |
| 4 | **333** | Screw M2 x 10 |
| 4 | **647** | Countersunk screw M3 x 16 |
| 8 | **1260** | Countersunk screw M2 x 10 |
| 1 | **1420** | Cross member, hind carriage, top |
| 2 | **1423** | Carrier for cab and entrances |
| 4 | **1424** | Angle for pivot bearing |
| 1 | **1426** | Support for box, -rh- |
| 1 | **1429** | Support for box, -lh- |



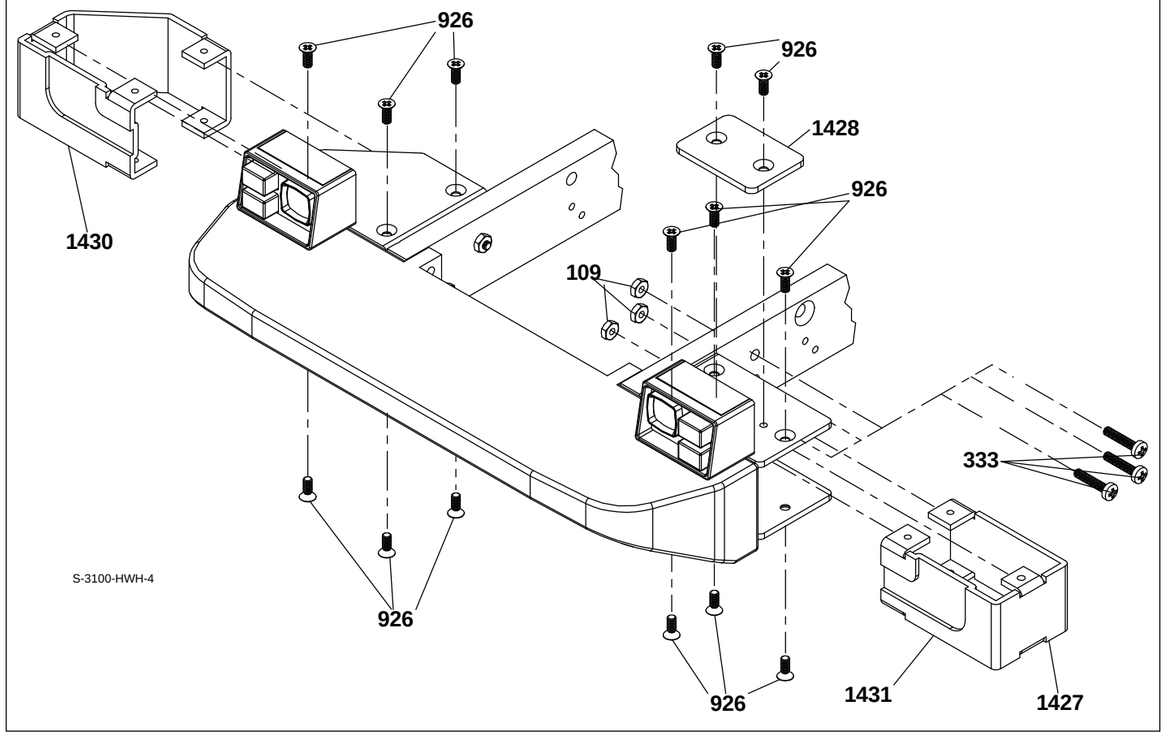

## 1.4 Components belonging to the rear frame

On the right-hand side, slide the box housing **1427** into the premounted support, and fix it from top and from underneath using each three countersunk screws **926**. Over that mount then the box cover **1428**, using exactly the same screws. Again, with countersunk screws **926** add now the box housing **1430** to the left-hand side.

For the later attachment of the ladder to the rear right-hand side, mount the support **1431** using screws **333** and nuts **109** onto the frame.

*Assembly step 1.4*

| Qty. | No. | Assembly part |
|---|---|---|
| 3 | **109** | Nut M2 |
| 3 | **333** | Screw M2 x 10 |
| 14 | **926** | Countersunk screw M2 x 5 |
| 1 | **1427** | Housing for box, -rh- |
| 1 | **1428** | Cover for box, -rh- |
| 1 | **1430** | Housing for box, -lh- |
| 1 | **1431** | Support for ladder, rear, -rh- |



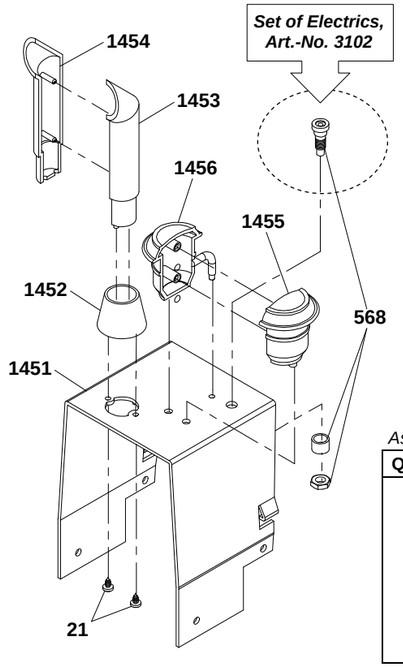
# 1 Pre-Assembly of the motor hood

## 2.1 Carrier for exhaust equipment and air-filter

➔ ***When installing the Set of Electrics, Art.-No. 3102:*** Affix the components for the antenna socket **568** as shown in the illustration. Please note that the antenna cable from the remote control receiver will have to be soldered to the antenna socket.

With tapping screws **21** first fix the base for exhaust **1452** onto the carrier **1451**. Use glue to connect the base for exhaust as well as both exhaust halves **1453** and **1454**. For this purpose fit both exhaust halves together and press them into the base for exhaust placed on the exhaust carrier.

Also, use glue to join both airfilter halves **1455** and **1456**: Fit one half into the other, and add them with glue to the carrier.




S-3100-MH-3

*Assembly step 2.1*

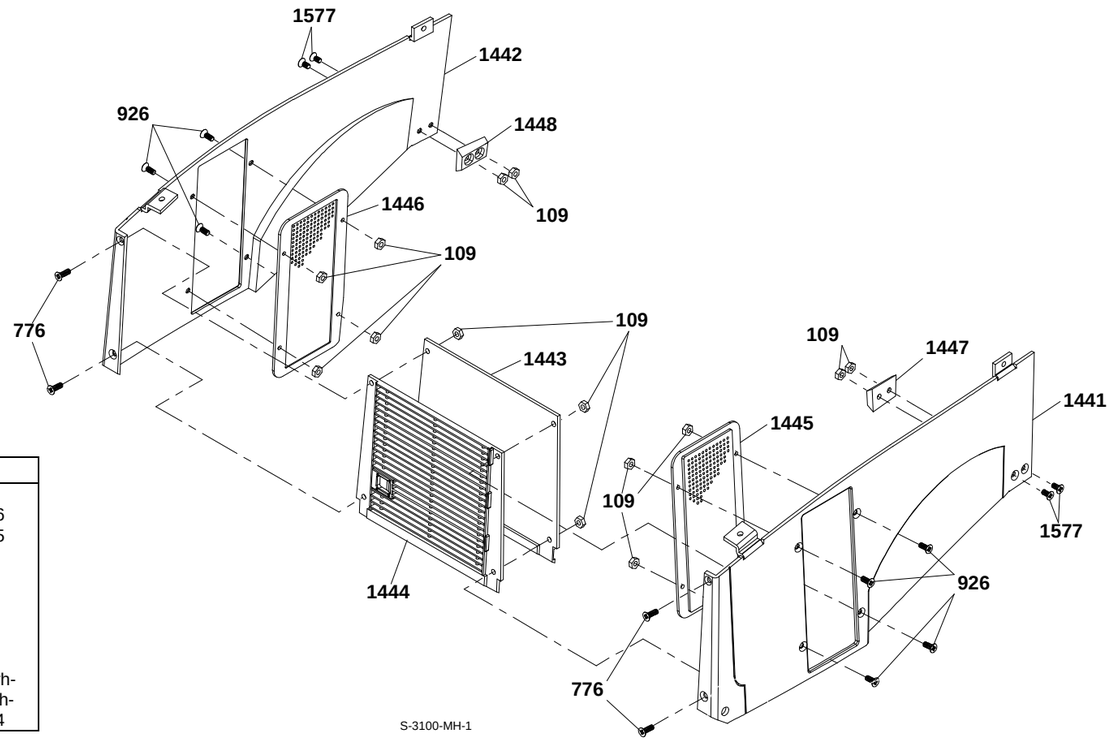
| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **21** | Tapping screw 2.2 x 4.5 |
| 1 | **568** | * Antenna socket, complete |
| 1 | **1451** | Carrier for exhaust equipment and air filter |
| 1 | **1452** | Base for exhaust |
| 1 | **1453** | Exhaust half, -rh- |
| 1 | **1454** | Exhaust half, -lh- |
| 1 | **1455** | Air filter half, -rh- |
| 1 | **1456** | Air filter half, -lh- |

* *included in Art. 3102*

## 2.2 Side parts of the hood

Use countersunk screws **926** and nuts **109** for the attachment of the following parts: Onto the right-hand hood side **1441** add the right-hand ventilation grid **1445**; onto the left-hand hood side **1442** add the left-hand ventilation grid **1446**. Use countersunk screws **1577** and nuts **109** then to fix the squeezing devices **1447** and **1448**, each with it's sloped side to fit the front edge of both motor hood sides.

The radiator grille **1444** as well as the cover for the radiator grill **1443** have to be mounted together onto the side panels of the hood; for this purpose use countersunk screws **776** and nuts **109**.




S-3100-MH-1

*Assembly step 2.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 16 | **109** | Nut M2 |
| 4 | **776** | Countersunk screw M2 x 6 |
| 8 | **926** | Countersunk screw M2 x 5 |
| 1 | **1441** | Hood, side, -rh- |
| 1 | **1442** | Hood, side, -lh- |
| 1 | **1443** | Cover, radiator grille |
| 1 | **1444** | Radiator grille |
| 1 | **1445** | Ventilation grid, hood, -rh- |
| 1 | **1446** | Ventilation grid, hood, -lh- |
| 1 | **1447** | Squeezing device, hood, -rh- |
| 1 | **1448** | Squeezing device, hood, -lh- |
| 4 | **1577** | Countersunk screw M2 x 4 |

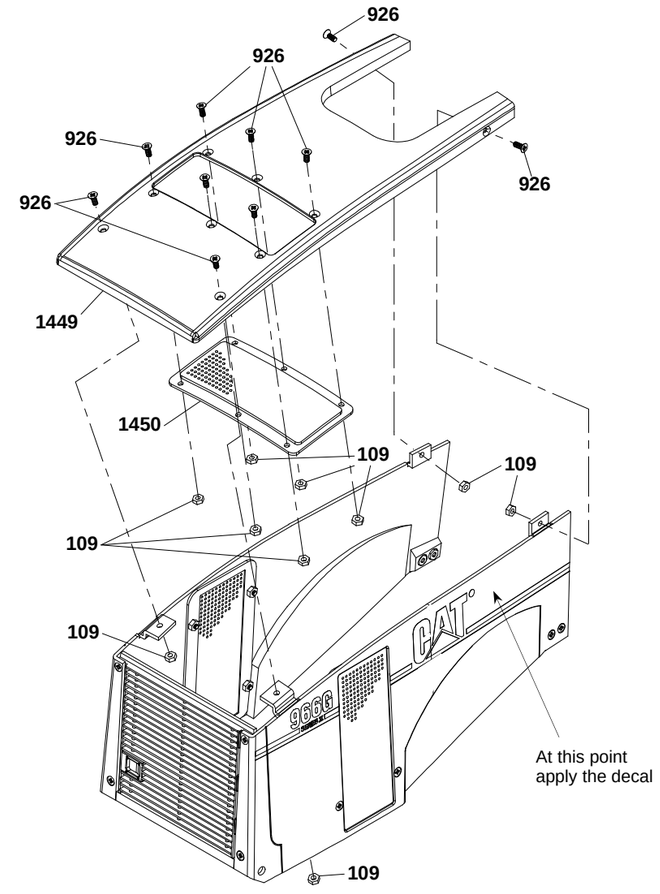
## 2.3 Upper part of the motor hood

Use countersunk screws **926** and nuts **109** to fix the upper ventilation grid **1450** underneath the upper part of the motor hood **1449**. Afterwards set the upper part onto the side panels and fix it with countersunk screws **926** and nuts **109**.

Now, on the right and left-hand hood side apply the decoration stripes. Afterwards, in order to leave the ventilation grids free, cut out that area which is still covering the grids.

*Assembly step 2.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 10 | **109** | Nut M2 |
| 10 | **926** | Countersunk screw M2 x 5 |
| 1 | **1449** | Hood, upper part |
| 1 | **1450** | Ventilation grid, hood, top |
| 1 | --- | Decal CATERPILLAR |

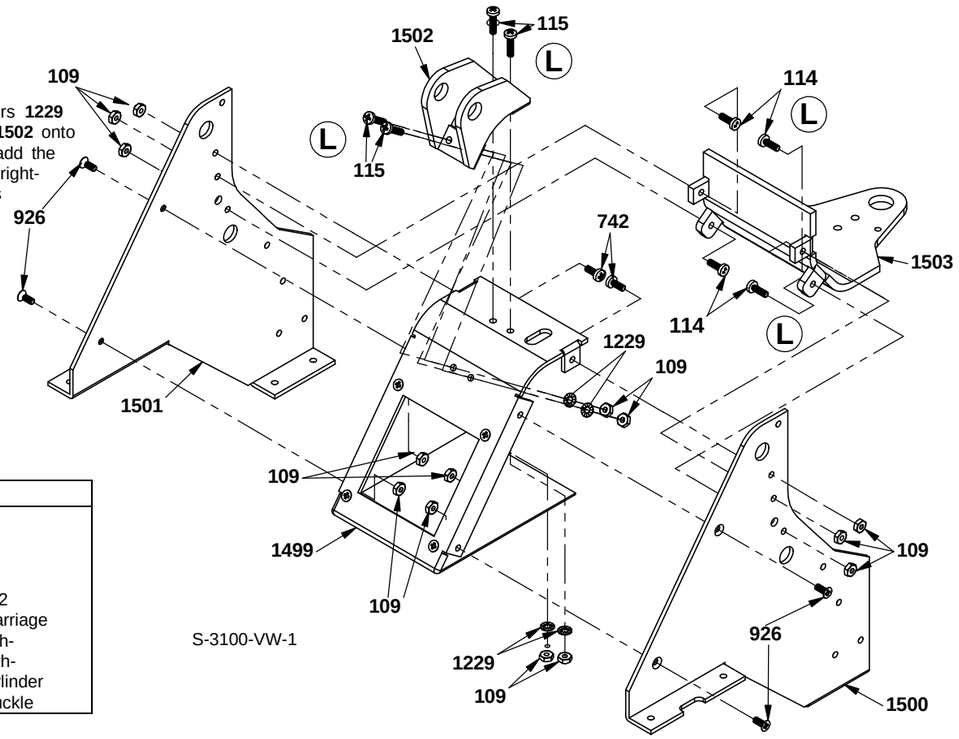



S-3100-MH-2

# 1 Mounting the front carriage

## 3.1 Central unit

With screws **115**, serrated washers **1229** and nuts **109** mount the support **1502** onto the central unit **1499**. Afterwards add the left-hand side plate **1500** and the right-hand side plate **1501** with screws **742** and nuts **109** onto the central unit. The plate for the turning knuckle **1503** has to be fixed with screws **114** and nuts **109** between both side plates.




*Assembly step 3.1*

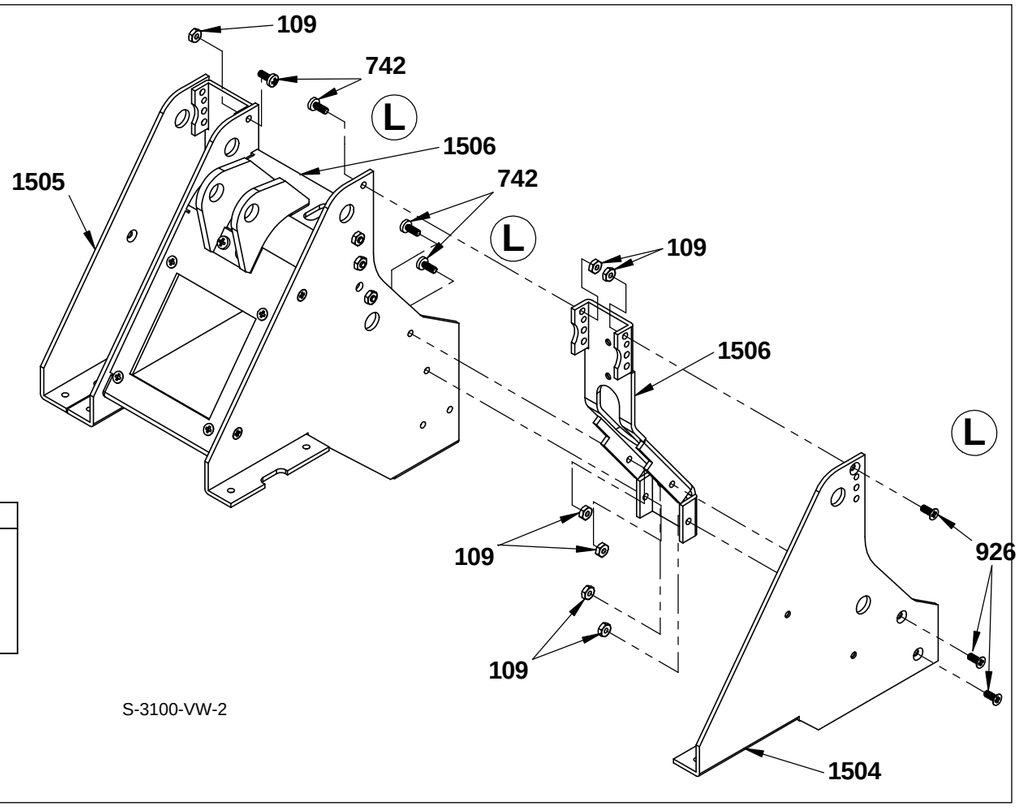
| Qty. | No. | Assembly part |
|---|---|---|
| 14 | **109** | Nut M2 |
| 4 | **114** | Screw M2 x 6 |
| 4 | **115** | Screw M2 x 8 |
| 6 | **742** | Screw M2 x 5 |
| 4 | **1229** | Serrated washer 2.2 |
| 1 | **1499** | Central unit, front carriage |
| 1 | **1500** | Side plate, inside, -lh- |
| 1 | **1501** | Side plate, inside, -rh- |
| 1 | **1502** | Support for tilting cylinder |
| 1 | **1503** | Plate for turning knuckle |

## 3.2 Outer plates for

**the four-plate loader tower**

Note: For reasons of a better overview, the illustration shows the screwed connections on the left-hand side only. Attachment of the parts on the right-hand side has to be done similarly.

With screws **742** and nuts **109** mount each one carrier **1506** onto the inner side plates. Mount the outer side plate **1504** onto the left-hand side, and the outer side plate **1505** onto the right-hand side; for this purpose use countersunk screws **926** and nuts **109**.




*Assembly step 3.2*

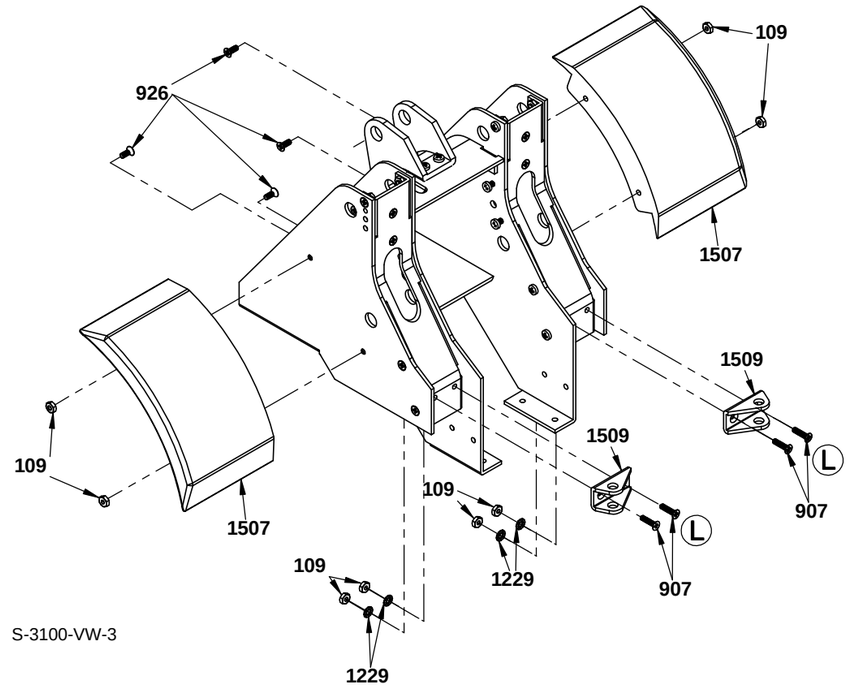
| Qty. | No. | Assembly part |
|---|---|---|
| 12 | **109** | Nut M2 |
| 6 | **742** | Screw M2 x 5 |
| 6 | **926** | Countersunk screw M2 x 5 |
| 1 | **1504** | Side plate, outside, -lh- |
| 1 | **1505** | Side plate, outside, -rh- |
| 2 | **1506** | Carrier for side plates |

## 3.3 Front fenders

Use countersunk screws **907**, serrated washers **1229** and nuts **109** to fix both supports **1509** -serving for the attachment of the steering cylinder- onto the four-plate loader tower. Then add both fenders **1507** with screws **926** and nuts **109**.

*Assembly step 3.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 8 | **109** | Nut M2 |
| 4 | **926** | Countersunk screw M2 x 5 |
| 4 | **907** | Countersunk screw M2 x 8 |
| 4 | **1229** | Serrated washer 2.2 |
| 2 | **1507** | Fender, front |
| 2 | **1509** | Support for steering cylinder, front |




**Note!**

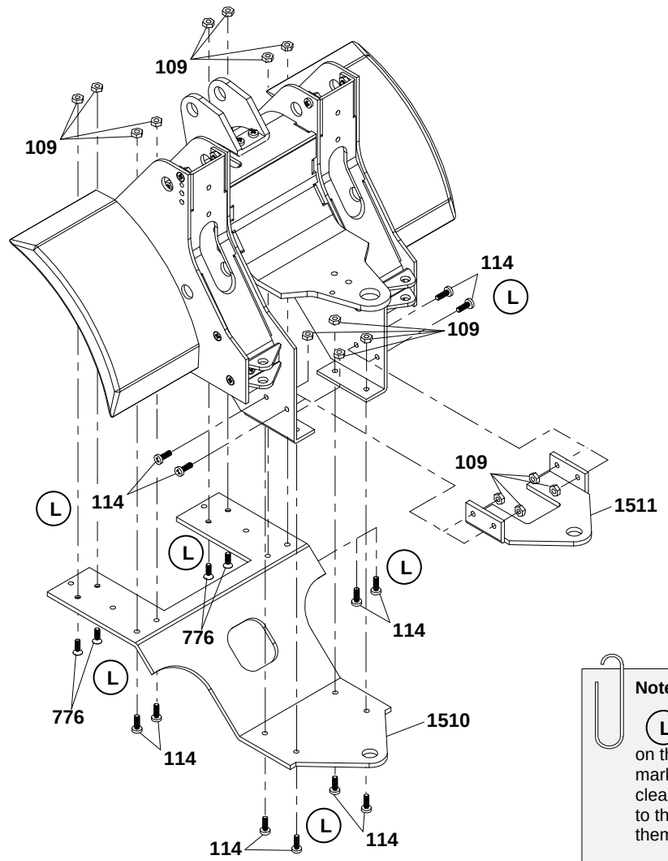
L As soon as you have completed the assembly, on those screw connections marked by "L" add a bit of clear varnish (e. e. nail varnish) to the **nuts** in order to **secure** them firmly.

### 3.4 Floor of the front carriage

As shown in the drawing, fix the floor plate **1510** with screws **114**, countersunk screws **776** and nuts **109** underneath the four-plate loader tower. Fix the crossmember **1511** between the inner side plates with screws **114** and nuts **109**.

*Assembly step 3.4*

| Qty. | No. | Assembly part |
|---|---|---|
| 16 | **109** | Nut M2 |
| 12 | **114** | Screw M2 x 6 |
| 4 | **776** | Countersunk screw M2 x 6 |
| 1 | **1510** | Floor plate, front carriage |
| 1 | **1511** | Cross member, front carriage, bottom |




**Note!**

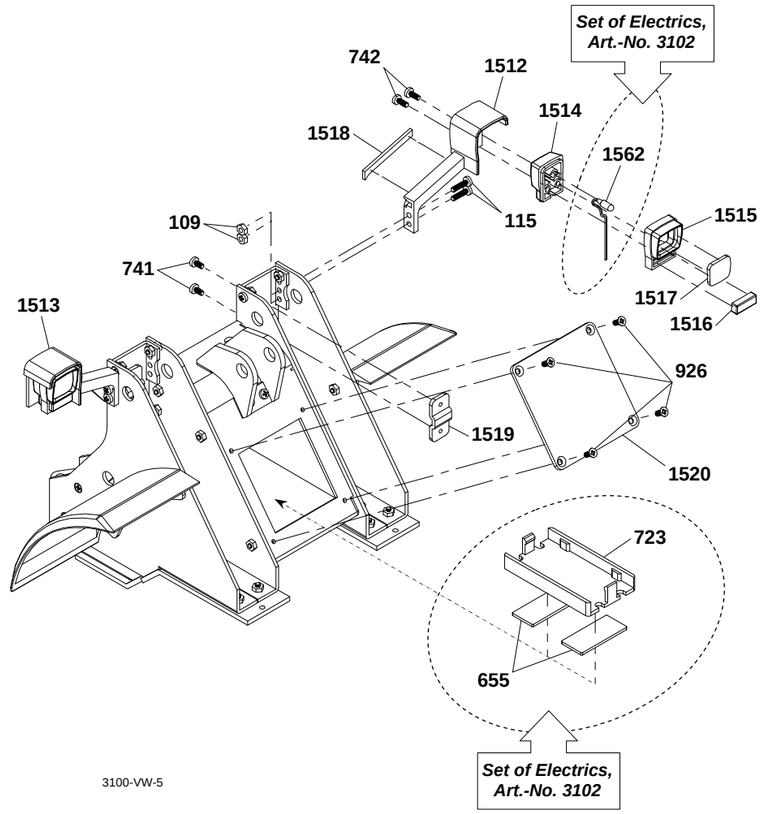
(L) As soon as you have completed the assembly, on those screw connections marked by "L" add a bit of clear varnish (e. e. nail varnish) to the **nuts** in order to **secure** them firmly.

3100-VW-4

*Assembly step3.5*

| Qty. | No. | Assembly part |
|---|---|---|
| 4 | **109** | Nut M2 |
| 4 | **115** | Screw M2 x 8 |
| 2 | **655** | * Adhesive pad, double-sided |
| 1 | **723** | * PCB support, small |
| 4 | **741** | Screw M2 x 4 |
| 4 | **742** | Screw M2 x 5 |
| 4 | **926** | Countersunk screw M2 x 5 |
| 1 | **1512** | Lamp support, front, -lh- |
| 1 | **1513** | Lamp support, front, -rh |
| 2 | **1514** | Lamp housing, front |
| 2 | **1515** | Lamp frame, front |
| 2 | **1516** | Lens, front, small |
| 2 | **1517** | Lens, front, big |
| 2 | **1518** | Cable cover, lamp support, front |
| 2 | **1519** | Plate for bulb wire |
| 1 | **1520** | Cover for centre unit, front carriage |
| 2 | **1562** | * Bulb 5V |

* *included in Art. 3102*




3100-VW-5

### 3.5 Front lamps

If you wish so, prior to the assembly dye the small lamp lenses **1516** in orange colour. Equip one lamp frame **1515** with one small lamp lens and one bigger lamp lens **1517**; use a bit of glue to fix them.

With screws **742** attach one lamp housing **1514** onto the left-hand lamp support **1512**.

➔ ***When installing the Set of Electrics, Art.-No. 3102:*** The lamp supports include a cable channel, and the four-plate loader tower offers special holes provided for the bulb wires to be led through to the circuit board. Insert the bulbs **1562** into the lamp housings. Before you lead the bulb wire into the inside of the four-plate loader tower, fix the complete lamp support onto the front carriage (as shown at the bottom). The plates **1519** -serving for the attachment of the bulb wires- are fixed with screws **741**. Be careful and make sure that the bulb wires are not squeezed as this would cause a short circuit.

Now press the lamp frame previously equipped with the lenses into the lamp housing. Fix the complete lamp support with screws **115** and nuts **109** onto the front carriage. Close the cable channel inside the lamp support using one cable cover **1518**.

Similarly, add the right lamp support **1513** onto the right-hand side of the four-plate loader tower using the same assembly parts.

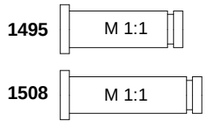
➔ ***When installing the Set of Electrics, Art.-No. 3102:*** With two adhesive pads **655** attach the PCB support **723** -serving for the rear lighting board- as shown into the four-plate loader tower.

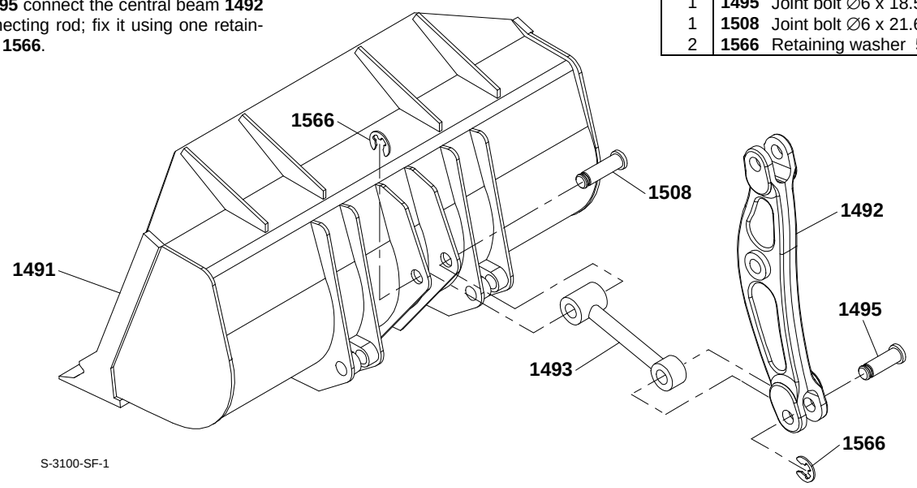
With countersunk screws **926** add the cover **1520** onto the central unit (if applicable, after the installation of the Electrical System).

# 4 Assembly group of the bucket

## 4.1 Mounting the central beam to the bucket

Use one joint bolt **1508** to connect the bucket **1491** to the connecting rod **1493**. Fix the bolt with one retaining washer **1566**. With one join bolt **1495** connect the central beam **1492** to the connecting rod; fix it using one retaining washer **1566**.




S-3100-SF-1

*Assembly step 4.1*

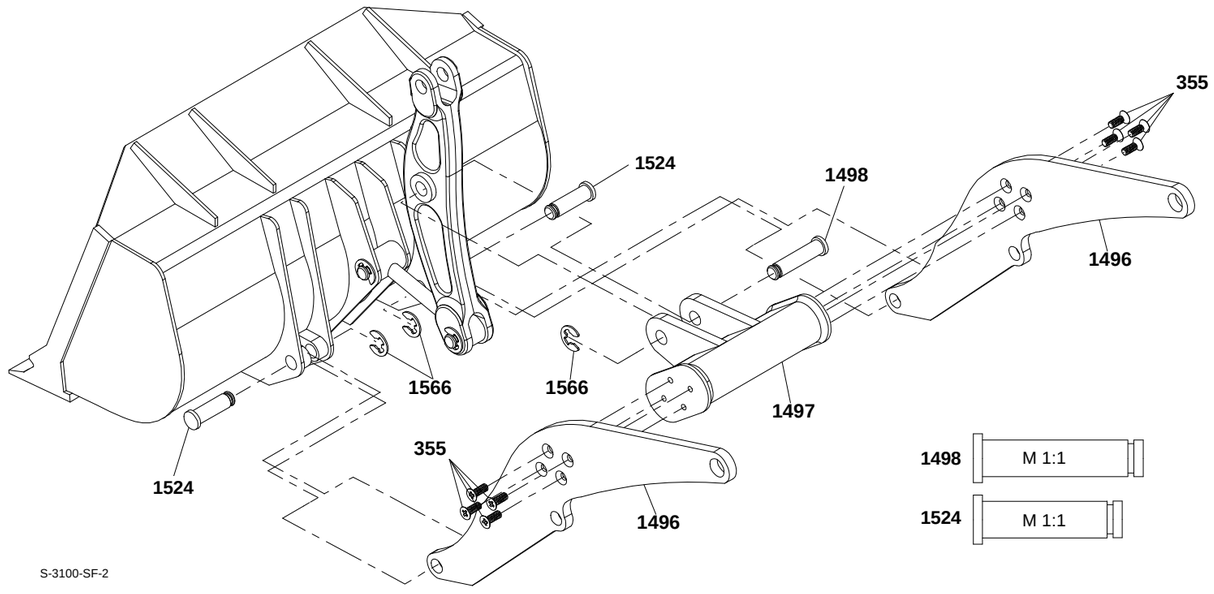
| Qty. | No. | Assembly part |
|---|---|---|
| 1 | **1491** | Bucket |
| 1 | **1492** | Central beam |
| 1 | **1493** | Connecting rod |
| 1 | **1495** | Joint bolt ∅6 x 18.5 |
| 1 | **1508** | Joint bolt ∅6 x 21.6 |
| 2 | **1566** | Retaining washer 5 |

## 4.2 Bucket arms

With countersunk screws **355** attach both bucket arms **1496** onto the central carrier **1497**. Using joint bolts **1524** connect the bucket arms with the bucket itself and secure them with retaining washers **1566**. Finally mount the bucket arm central carrier with one joint bolt **1498** onto the central beam. Fix it using one retaining washer **1566**.

*Assembly step 4.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 8 | **355** | Countersunk screw M3 x 8 |
| 2 | **1496** | Bucket arm |
| 1 | **1497** | Central carrier, bucket arm |
| 1 | **1498** | Joint bolt ∅6 x 26.2 |
| 2 | **1524** | Joint bolt ∅6 x 22.8 |
| 3 | **1566** | Retaining washer 5 |




S-3100-SF-2

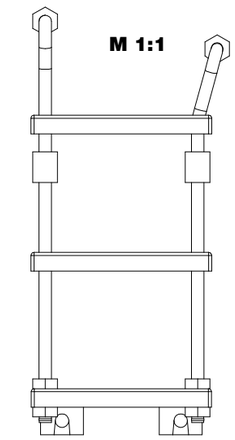
# 5 Fittings for the right-hand side

## 5.1 Pre-assembly of the ladder for the right-hand side

For the later attachment of the ladder to the hind carriage, turn each one nut **109** onto the upper ends of the ladder frames **1463** and **1464**. Turn the nuts for several times up and down until they become easy to add.

Now, slide the following parts -one by one- onto the frame units: one step **1465** (with holes on top), each one T-piece **1468**, a second step **1465**, each one nut **109**, one step **1466** (with fixing links), and each one further nut **109**.

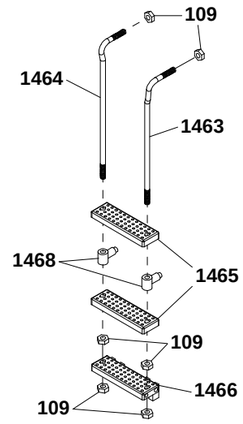
When mounting the unit to the hind carriage (see assembly step 12.4) slide the steps into place and fix them using either the securing nuts or glue.




S-3100-HWR-1b

*Assembly step 5.1*

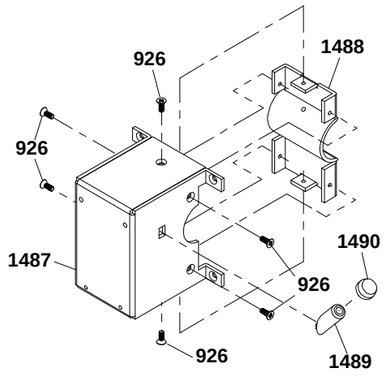
| Qty. | No. | Assembly part |
|---|---|---|
| 6 | **109** | Nut M2 |
| 1 | **1463** | Ladder frame, front, -rh- |
| 1 | **1464** | Ladder frame, rear |
| 2 | **1465** | Step with top holes |
| 1 | **1466** | Step with fixing links |
| 2 | **1468** | T-piece, closed |




S-3100-HWR-1

## 5.2 Pre-assembly of the tank housing

With countersunk screws **926**, add the inner tank side **1488** onto the tank housing **1487**. Glue the tank tube **1489** and the tank tube cover **1490** together; afterwards use glue again to add them to the tank housing.




*Assembly step 5.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 6 | **926** | Countersunk screw M2 x 5 |
| 1 | **1487** | Tank housing |
| 1 | **1488** | Tank side, inside |
| 1 | **1489** | Tank tube |
| 1 | **1490** | Cover for tank tube |

S-3100-HWR-3

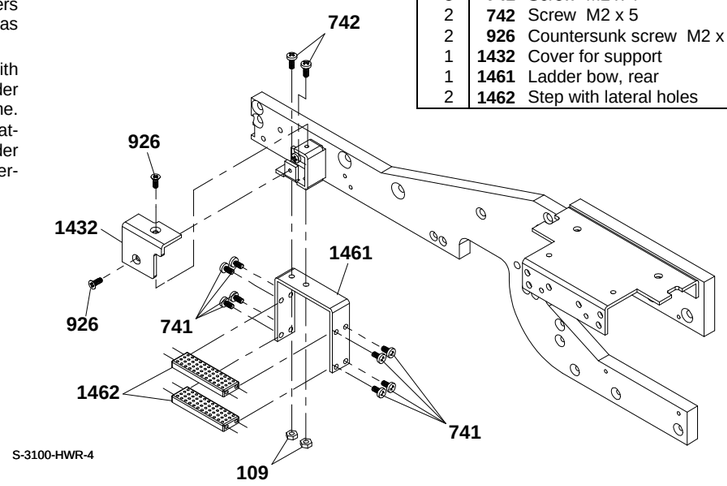
### 5.3 Mounting the rear ladder

Note: For reasons of a better overview, the illustration shows a few parts only of those components you have already mounted: the right-hand side frame along with the carriers provided for the cab and entrance, as well as the support for the rear ladder.

Start by fixing the ladder bow **1461** with screws **742** and nuts **109** onto the ladder support previously mounted onto the frame. Afterwards attach both steps **1462** (with lateral holes) with screws **741** onto the ladder bow. Now fix the cover **1432** using countersunk screws **926**.

*Assembly step 5.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **109** | Nut M2 |
| 8 | **741** | Screw M2 x 4 |
| 2 | **742** | Screw M2 x 5 |
| 2 | **926** | Countersunk screw M2 x 5 |
| 1 | **1432** | Cover for support |
| 1 | **1461** | Ladder bow, rear |
| 2 | **1462** | Step with lateral holes |




S-3100-HWR-4

### 5.4 Right-hand stepboard with attached components

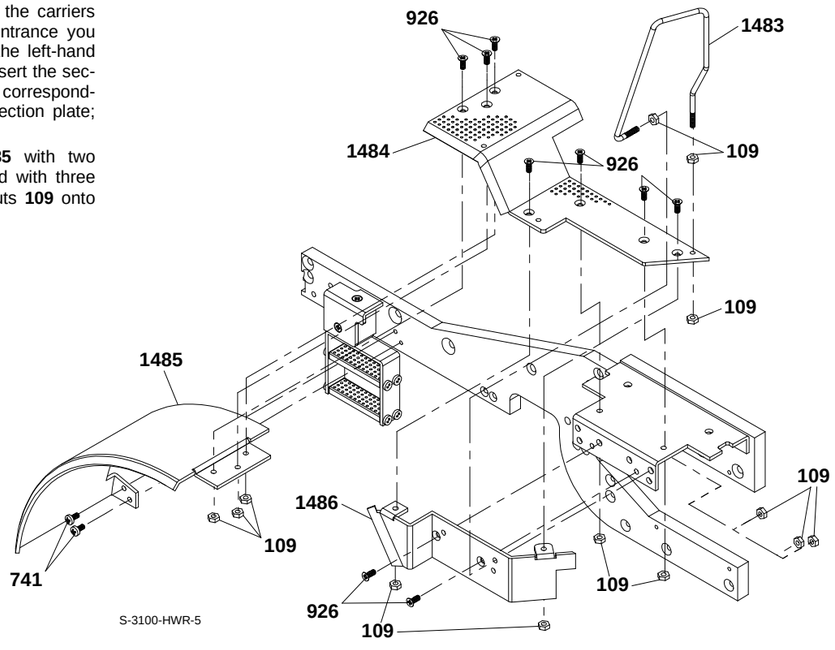
For the attachment to the step and the protection plate, turn each one nut **109** onto the thread ends of the right handrail **1483**. Then set the vertical end into the corresponding hole on the right-hand stepboard **1484**, and secure the handrail from underneath with one further nut **109**.

Afterwards mount the right-hand protection plate **1486** onto the stepboard; for this purpose use two countersunk screws **926** and nuts **109**. The same countersunk screws serve to attach both parts onto the carriers provided for the cab and the entrance you previously have mounted onto the left-hand side of the hind carriage. Now insert the second end of the handrail into the corresponding hole on stepboard and protection plate; secure it with one nut **109**.

Fix the right-hand fender **1485** with two screws **741** onto the frame, and with three countersunk screws **926** and nuts **109** onto the stepboard.

*Assembly step 5.4*

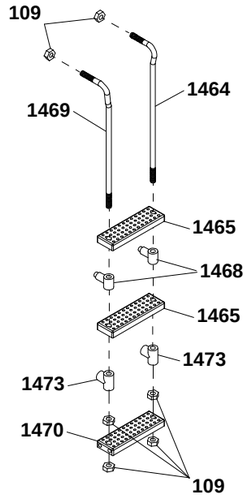
| Qty. | No. | Assembly part |
|---|---|---|
| 13 | **109** | Nut M2 |
| 2 | **741** | Screw M2 x 4 |
| 9 | **926** | Countersunk screw M2 x 5 |
| 1 | **1483** | Handrail, front, -rh- |
| 1 | **1484** | Stepboard, -rh- |
| 1 | **1485** | Fender, rear, -rh- |
| 1 | **1486** | Protection plate for ladder, -rh- |




S-3100-HWR-5

*Assembly step 6.1*

| Qty. | No. | Assembly part |
|---|---|---|
| 6 | **109** | Nut M2 |
| 1 | **1464** | Ladder frame, rear |
| 2 | **1465** | Step with top holes |
| 2 | **1468** | T-piece, closed |
| 1 | **1469** | Ladder frame, front, -lh- |
| 1 | **1470** | Step with top + lateral holes |
| 2 | **1473** | T-piece, open |



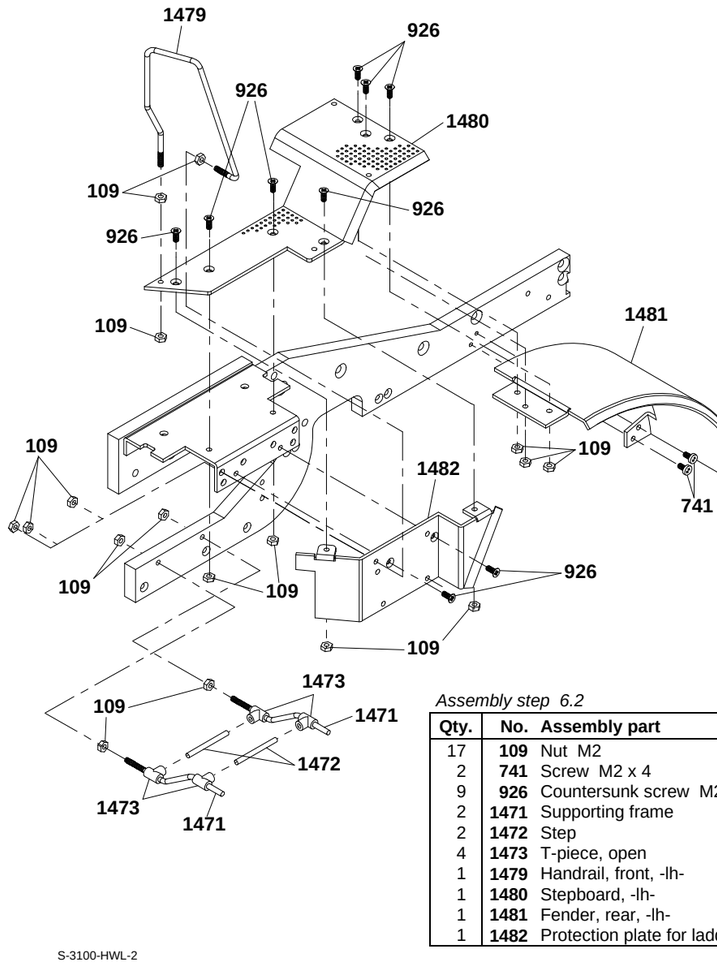

S-3100-HWL-1

## 4 Fittings for the left-hand side

### 6.1 Pre-assembly of the ladder for the left-hand side

For the later attachment of the ladder to the hind carriage, turn each one nut **109** onto the upper ends of the ladder frames **1464** and **1469**. Turn the nuts for several times up and down until they become easy to add.

Now, slide the following parts -one by one- onto the frame units: one step **1465** (with holes on top), each one T-piece **1468**, a second step **1465**, each one T-piece **1473**, each one nut **109**, one step **1470** (with holes on top and on the side), and each one further nut **109**. When mounting the unit to the hind carriage (see assembly step 12.6) slide the steps into place and fix them using either the securing nuts or glue.




S-3100-HWL-2

### 6.2 Left-hand stepboard with attached components

Note: For reasons of a better overview, of those premounted components belonging to the hind carriage it is just the left-hand frame side and the carrier for cab and entrance which are included with the illustration.

For the attachment to the step and the protection plate, turn each one nut **109** onto the thread ends of the left handrail **1479**. Then set the vertical end into the corresponding hole on the left-hand stepboard **1480**, and secure the handrail from underneath with one further nut **109**.

Afterwards mount the left-hand protection plate **1482** onto the stepboard; for this purpose use two countersunk screws **926** and nuts **109**. The same countersunk screws serve to attach both parts onto the carriers provided for the cab and the entrance you previously have mounted onto the left-hand side of the hind carriage. Now insert the second end of the handrail into the corresponding hole on stepboard and protection plate; secure it with one nut **109**.

Fix the left-hand fender **1481** with two screws **741** onto the frame, and with three countersunk screws **926** and nuts **109** onto the stepboard.

Fix the left-hand fender **1481** with two screws **741** onto the frame, and with three countersunk screws **926** and nuts **109** onto the stepboard.

Use the steps **1472** to connect both supporting frames, and set the supporting frames into the holes therefore provided on the chassis; fix them from the rear with one further nut **109**. If one of these parts remains loosely (e.g. steps), please use a bit of glue to fix them properly.

*Assembly step 6.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 17 | **109** | Nut M2 |
| 2 | **741** | Screw M2 x 4 |
| 9 | **926** | Countersunk screw M2 x 5 |
| 2 | **1471** | Supporting frame |
| 2 | **1472** | Step |
| 4 | **1473** | T-piece, open |
| 1 | **1479** | Handrail, front, -lh- |
| 1 | **1480** | Stepboard, -lh- |
| 1 | **1481** | Fender, rear, -lh- |
| 1 | **1482** | Protection plate for ladder, -lh- |

# 4 Installation of the gear-box and the motor, both belonging to the Set of Electrics, Art.-No. 3102

## 7.1 Assembly of motor and operating servo to the gearbox

➔ ***When installing the Set of Electrics, Art.-No. 3102:***

Remove the white motor pinion (14 teeth) from the shaft of the motor **1175** and replace it by the 12-teeth brass motor pinion **1164**. Using a threaded pin **1171** which is pressed onto the flattening on the shaft, the pinion will be fixed onto the shaft (appropriate Allen wrench **1172** is included in the kit 3100).

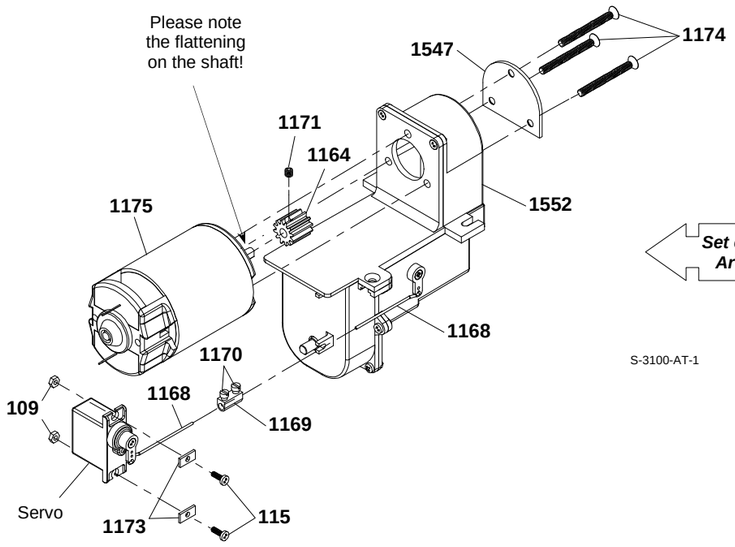
Set the cover plate **1547** in front of the gearbox rear side **1552**; with three screws **1174** now fix the motor onto the proper gear unit.

Before you start mounting the servo lever onto the servo, use your RC equipment or a servo tester to set the servo into position "Zero" (= middle of the lever way).

Accordingly to the illustration, hang both slide rods **1168** with the bent hook on one side into the operating arm of the gear unit, and on the other side into the lever arm of the servo. Then connect both slide rods with the binder **1169** along with both screws **1170** as follows: Use screws **115**, U-plates **1173** and nuts **109** to attach the servo onto those metal noses provided for the later attachment of the gear unit.

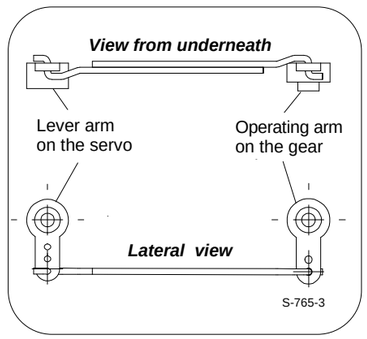
Note serving for the operation of the All-wheel gearbox: The gearbox should never be operated when the wheel loader is in motion! The reduction ratios are as follows:

**1. Gear 12 : 1** (*Operating lever front*)
**2. Gear 6 : 1** (Operating *lever centre*)
**3. Gear 3 : 1** ((*Operating lever rear*)




S-3100-AT-1

➔ *Set of Electrics, Art.-Nr. 3102*

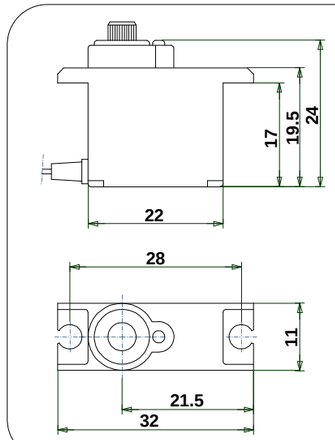



S-765-3

*Assembly step 7.1*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **109** | ∗ Nut M2 |
| 2 | **115** | ∗ Screw M2 x 8 |
| 1 | **1164** | ∗ Motor pinion, brass, with12 teeth |
| 2 | **1168** | ∗ Slide rod |
| 1 | **1169** | ∗ Binder for slide rod |
| 2 | **1170** | ∗ Screw M2.6 x 5 |
| 1 | **1171** | ∗ Threaded pin M3 x 3 |
| 2 | **1173** | ∗ U-plate 2 |
| 3 | **1174** | ∗ Countersunk screw M3 x 30 |
| 1 | **1175** | ∗ Bühler motor incl. 14 teeth pinion |
| 1 | **1547** | ∗ Cover plate for gearbox, CAT |
| 1 | **1552** | ∗ All-wheel gearbox, mounted, CAT |

∗ *included in Art. 3102*




### Fitting types of servos

Miniature servos are offered by several manufacturers. As an example for the fifthwheel unit we have chosen a servo manufactured by MULTIPLEX. This servo is on offer with different types of plugs:

***for MULTIPLEX equipment:***

MULTIPLEX-*Servo MS-X2 with MPX-plug,*
MULTIPLEX *Art.-No. 65040*

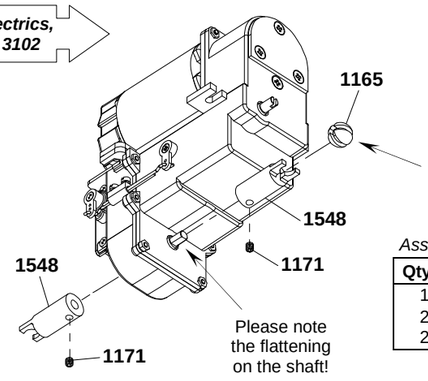
***für Graupner- und Futaba-Anlagen:***

MULTIPLEX-*Servo MS-X2 with Uni-plug,*
MULTIPLEX *Art.-No. 65140*

The measurements of this servo are shown at original size in the illustration. Important note: Only this size of servo will fit the gearbox.

If you intend using any other servo type, you either will have to check the compatibility (functions and accurate fit) by yourself, or to ask your dealer for advice.

➔ *Set of Electrics, Art.-Nr. 3102*




S-3100-AT-2

## 7.2 Assembly of the cardan catch to the gearbox

➔ ***When installing the Set of Electrics, Art.-No. 3102:*** Pin each one cardan catch **1548** onto both ends of the drive shaft belonging to the gearbox. Using a threaded pin **1171** which is pressed onto the flattening on the shaft, the pinion will be fixed onto the shaft. Afterwards insert one joint ball **1165** onto the rear cardan catch, and then turn the ball by 90 degrees.

*Assembly step 7.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 1 | **1165** | ∗ Joint ball |
| 2 | **1171** | ∗ Threaded pin M3 x 3 |
| 2 | **1548** | ∗ Cardan catch with hole, long |

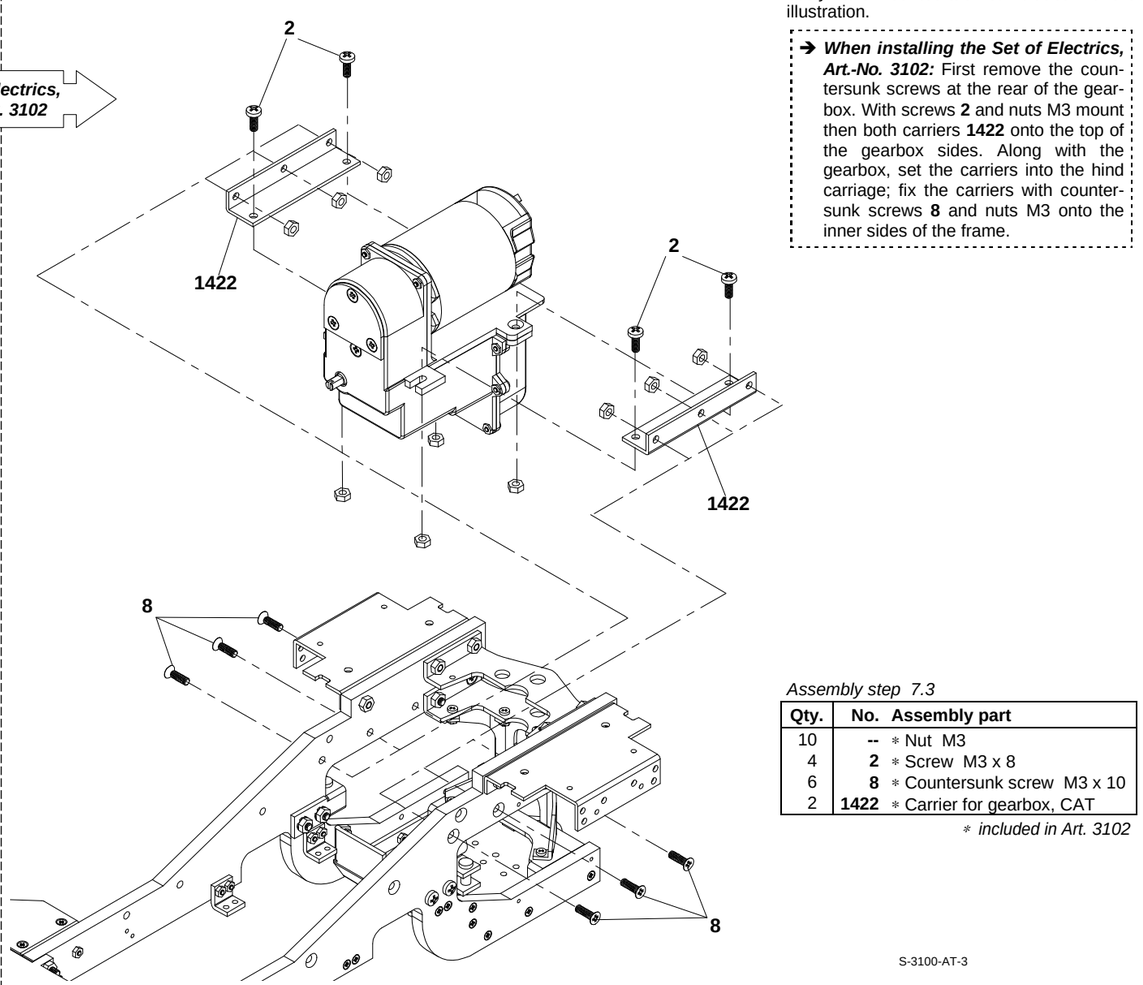
∗ *included in Art. 3102*

## 7.3 Installation of the gearbox

Note: For reasons of a better overview, the lateral fittings of the hind carriage you previously have mounted are not included with the illustration.

➔ ***When installing the Set of Electrics, Art.-No. 3102:*** First remove the countersunk screws at the rear of the gearbox. With screws **2** and nuts M3 mount then both carriers **1422** onto the top of the gearbox sides. Along with the gearbox, set the carriers into the hind carriage; fix the carriers with countersunk screws **8** and nuts M3 onto the inner sides of the frame.

➔ *Set of Electrics, Art.-Nr. 3102*




S-3100-AT-3

*Assembly step 7.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 10 | **--** | ∗ Nut M3 |
| 4 | **2** | ∗ Screw M3 x 8 |
| 6 | **8** | ∗ Countersunk screw M3 x 10 |
| 2 | **1422** | ∗ Carrier for gearbox, CAT |

∗ *included in Art. 3102*

# 4 Connection of hind carriage to front carriage plus installation of the differentials

## 8.1 Rear axle differential

Note: For reasons of a better overview, the lateral fittings of the hind carriage you previously have mounted are not included with the illustration.

Attention! When installing the rear-axle differential **1553** please make sure that the sense of rotation will match the one of the front-axle differential. If necessary rotate the rear-axle differential through 180° (upside down).

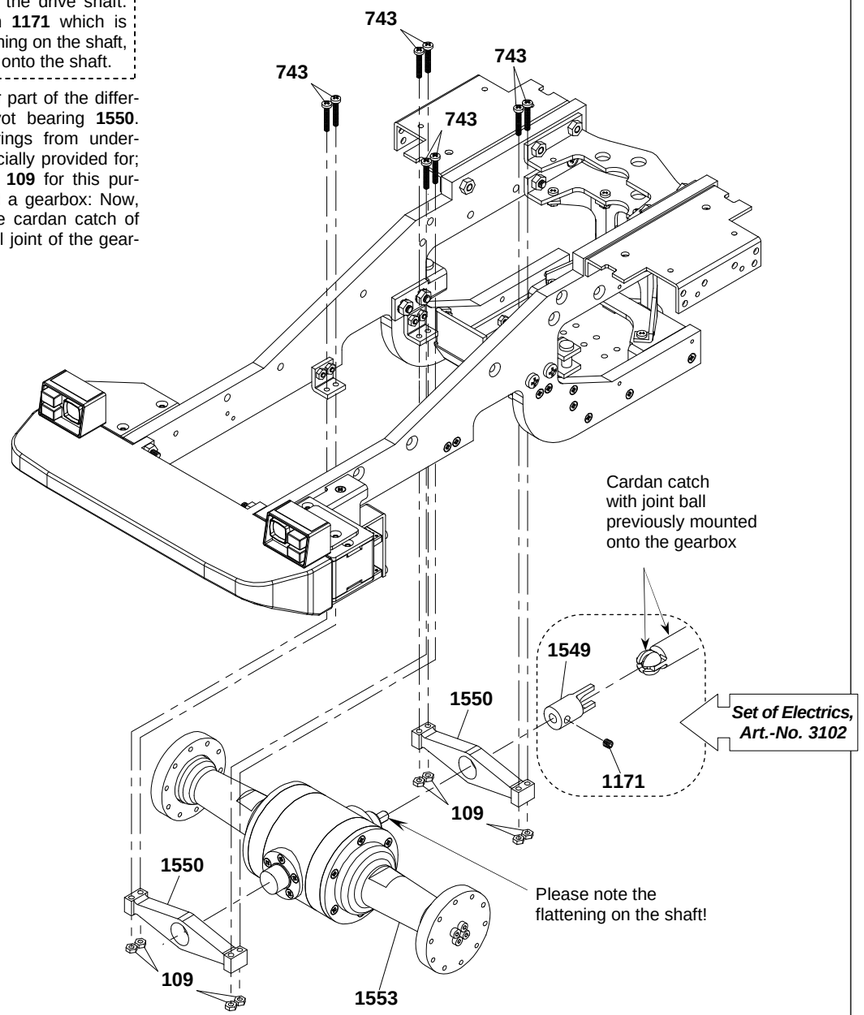
➔ ***When installing the Set of Electrics, Art.-No. 3102:*** Once you have slid a pivot bearing **1550** onto the front part of the differential, pin one cardan catch **1549** onto the end of the drive shaft. Using a threaded pin **1171** which is pressed onto the flattening on the shaft, the pinion will be fixed onto the shaft.

Onto the front and the rear part of the differential slide each one pivot bearing **1550**. Afterwards fix these bearings from underneath onto the angles specially provided for; use screws **743** and nuts **109** for this purpose. If you have installed a gearbox: Now, at the same time slide the cardan catch of the differential onto the ball joint of the gearbox.

*Assembly step 8.1*

| Qty. | No. | Assembly part |
|---|---|---|
| 8 | **109** | Nut M2 |
| 8 | **743** | Screw M2 x 12 |
| 1 | **1171** | ∗ Threaded pin M3 x 3 |
| 1 | **1549** | ∗ Cardan catch with hole, rear |
| 2 | **1550** | Pivot bearing |
| 1 | **1553** | Rear axle differential, CAT |

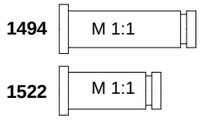
∗ *included in Art. 3102*




S-3100-AT-4

*Assembly step 8.2*

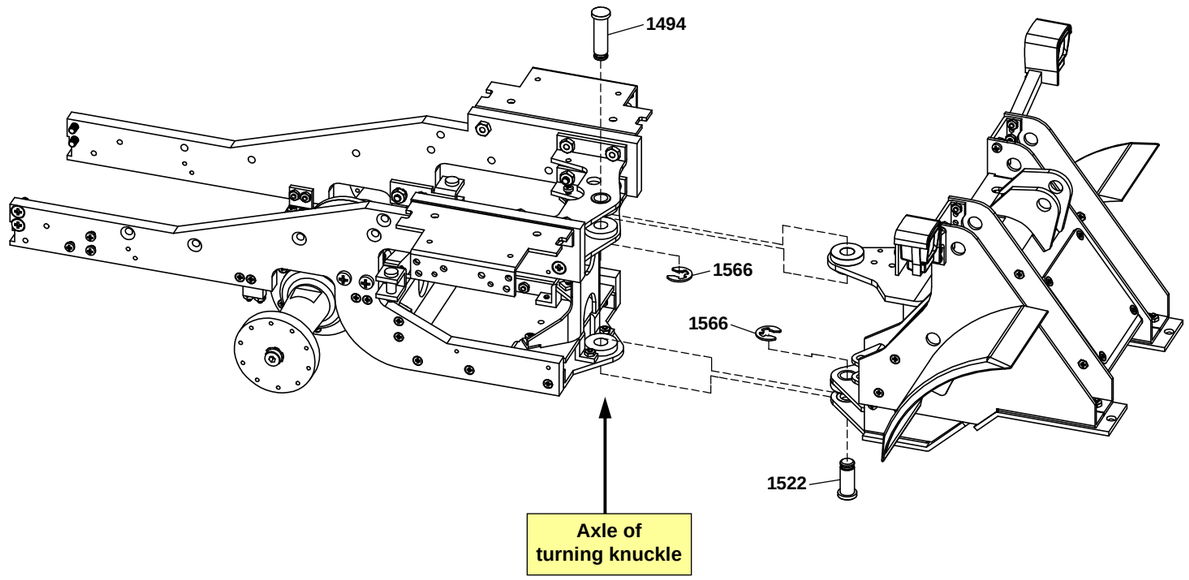
| Qty. | No. | Assembly part |
|---|---|---|
| 1 | **1494** | Joint bolt ∅6 x 20.8 |
| 1 | **1522** | Joint bolt ∅6 x 15.1 |
| 2 | **1566** | Retaining washer 5 |




## 8.2 Turning knuckle

Into the hole on the upper plate of the front carriage press from both sides each one bearing socket **1523**. Use one joint bolt **1494** and one retaining washer **1566** to fix this unit at the top between the crossmembers of the hind carriage.

From top press a further bearing socket **1523** into the floor of the hind carriage. In order to connect the floor plate of the hind carriage with the floor of the front carriage use the joint bolt **1522** and one retaining washer **1566**.




S-3100-EMO-1

## 8.3 Front axle differential

Note: For reasons of a better overview, the complete hind carriage is not included with the illustration.

➔ ***When installing the Set of Electrics, Art.-No. 3102:*** Put that cardan catch with hole **1166** onto the gear shaft of the front-axle differential **1554**. Using a threaded pin **1171** which is pressed onto the flattening on the shaft, the pinion will be fixed onto the shaft.

As shown in the illustration, press the joint ball **1165** onto the cardan catch on the differential, and afterwards turn the ball laterally by 90 degrees. From top, now set the cardan catch with inner hex head **1167** into place. Similarly equip the cardan catch on the gearbox by one joint ball **1165** and one cardan catch with inner hexagon socket **1167**.

Important! The joint ball centre on the gearbox has to lay along the same line with the axle of the turning knuckle. Adjust the cardan catch on the gearbox accordingly!

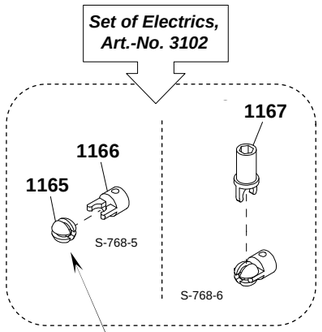
Insert the drive shaft **1551** into the cardan catches of the gearbox and the differential.

Mount the differential with screws **743** and nuts **109** underneath the front carriage.

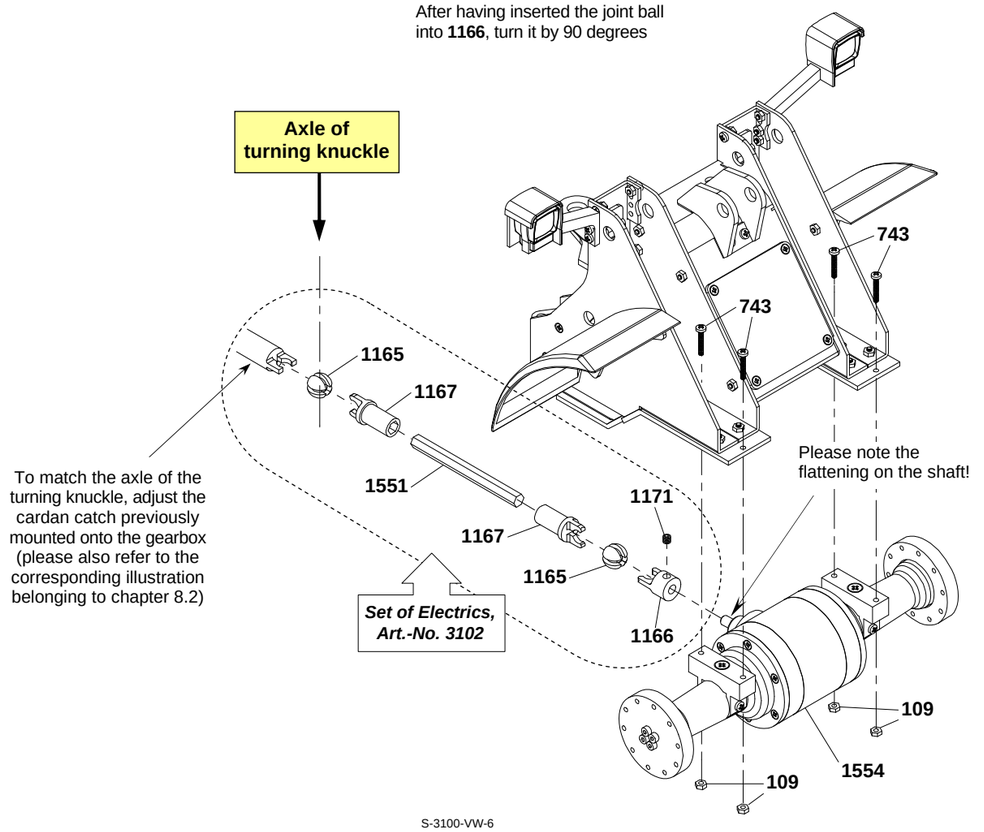
*Assembly step 8.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 4 | **109** | Nut M2 |
| 4 | **743** | Screw M2 x 12 |
| 2 | **1165** | ∗ Joint ball |
| 1 | **1166** | ∗ Cardan catch with hole |
| 2 | **1167** | ∗ Cardan catch with inner hexagon |
| 1 | **1171** | ∗ Threaded pin M3 x 3 |
| 1 | **1551** | ∗ Drive shaft 58mm, CAT |
| 1 | **1554** | Front axle differential, CAT |

∗ *included in Art. 3102*



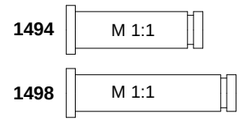

After having inserted the joint ball into **1166**, turn it by 90 degrees

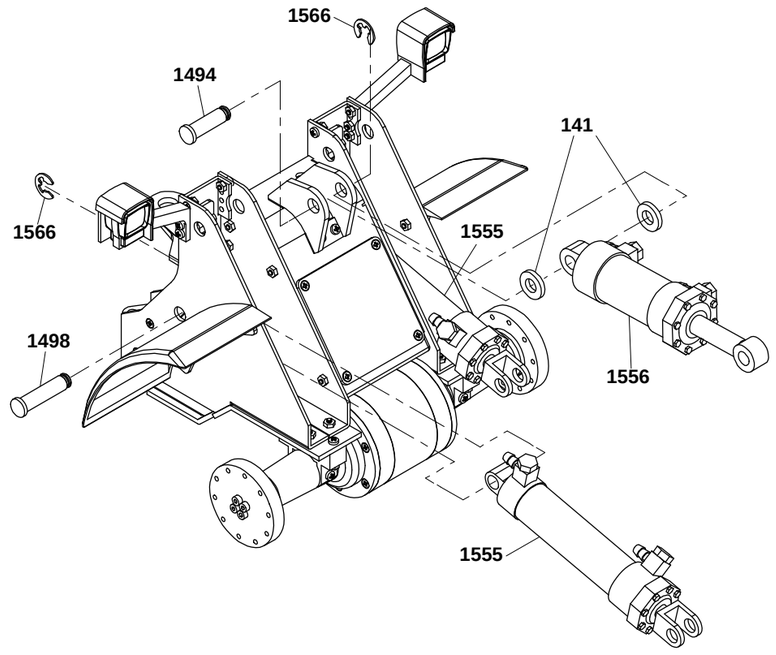



S-3100-VW-6

*Assembly step 9.1*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **141** | Washer 6.1 x 12 x 2 (PA) |
| 1 | **1494** | Joint bolt ∅6 x 20.8 |
| 2 | **1498** | Joint bolt ∅6 x 26.2 |
| 2 | **1555** | Lifting cylinder, -rh-/-lh- |
| 1 | **1556** | Tilting cylinder |
| 3 | **1566** | Retaining washer 5 |




S-3100-VW-7

# 4 Installation of the hydraulic cylinder

## 9.1 Installing both cylinder types, for lifting and for tilting purposes

Note: For reasons of a better overview, the complete hind carriage is not included with the drawing. The illustration shows the installation of the right-hand lifting cylinder only. Add the left-hand lifting cylinder by similar way.

➔ ***When installing the Set of Hydraulics, Art.-No. 3101:*** Please consider that the connections and embeddings of the hoses belonging to the Hydraulics have to be executed in parallel to the attachment of the cylinders and the components of the Set of Hydraulics (see chapter 10, too). Before you continue the assembly, it is necessary carefully to read the instructions of the Hydraulic Set.

There are openings in the central unit and in the carriers for the side plates of the front carriage as well as in the front plate of the hind carriage; these openings serve exactly to lead the hoses through. Prior to the installation of the cylinders, remove the existing short hoses fixed between the nipples. Of those hoses supplied with this kit, cut fitting pieces to length and use them to connect the nipples of the cylinder pairs. The nipples of the steering cylinders (chapter 9.2) need to be connected crosswise! The hose connections will be cut through once you have finished the installation of the cylinders. Cut then the hose pieces to length and insert a T-piece. Don't forget to add the retaining bushings! Mount the connecting hoses to the rear towards the control valve block; for this purpose, please consider enough length for embedding - the kit includes sufficient hose material.

With each one joint bolt **1498** and one retaining washer **1566** fix the lifting cylinders **1555** at the bottom between the side plates of the four-plate loader tower.

Attach the tilting cylinder **1556** with one joint ball **1494** and one retaining washer **1566** onto the support therefore provided; add on each side one washer **141** between support and tilting cylinder.

## 9.2 Installation of the steering cylinder

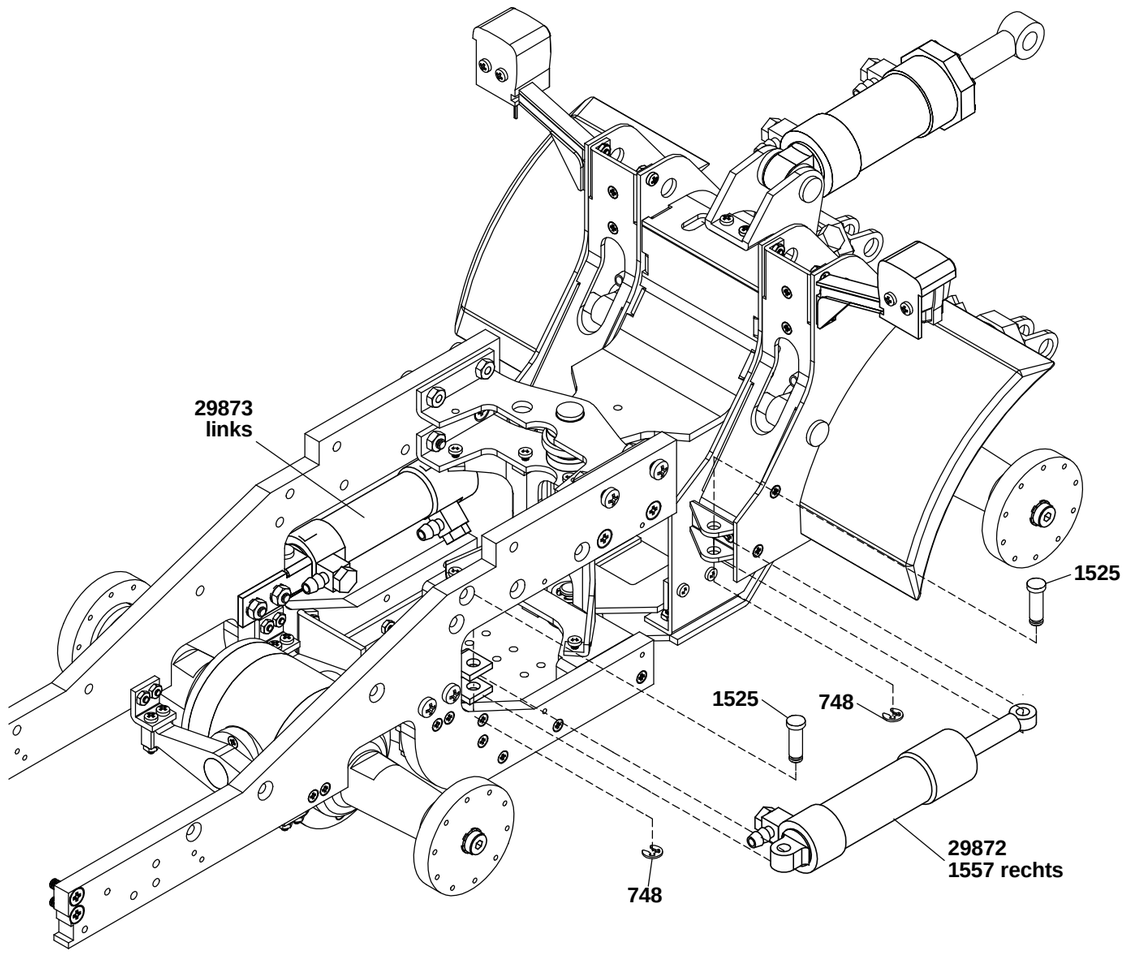
Note: In order to get a better overview, the lateral fittings of the hind carriage are not included with the drawing. The illustration shows the installation of the right-hand side steering cylinder only; fix the steering cylinder for the left-hand side similarly.

Press the joint bolt **1525** (added previously to the right-hand side support on the hind carriage) topwards; to this bolt add the steering cylinder **1557** with one retaining washer **748**. Also, using joint bolt **1525** and retaining washer **748** attach the sliding rod of the steering cylinder to the right-hand side support of the front carriage.

**1525** M 1:1

*Assembly step 9.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **115** | ∗ Screw M2 x 8 |
| 4 | **748** | Retaining washer 2.3 |
| 2 | **1525** | Joint bolt ∅4 x 12.7 |
| 2 | **1557** | Steering cylinder |




S-3100-EMO-2

*Assembly step 9.3*

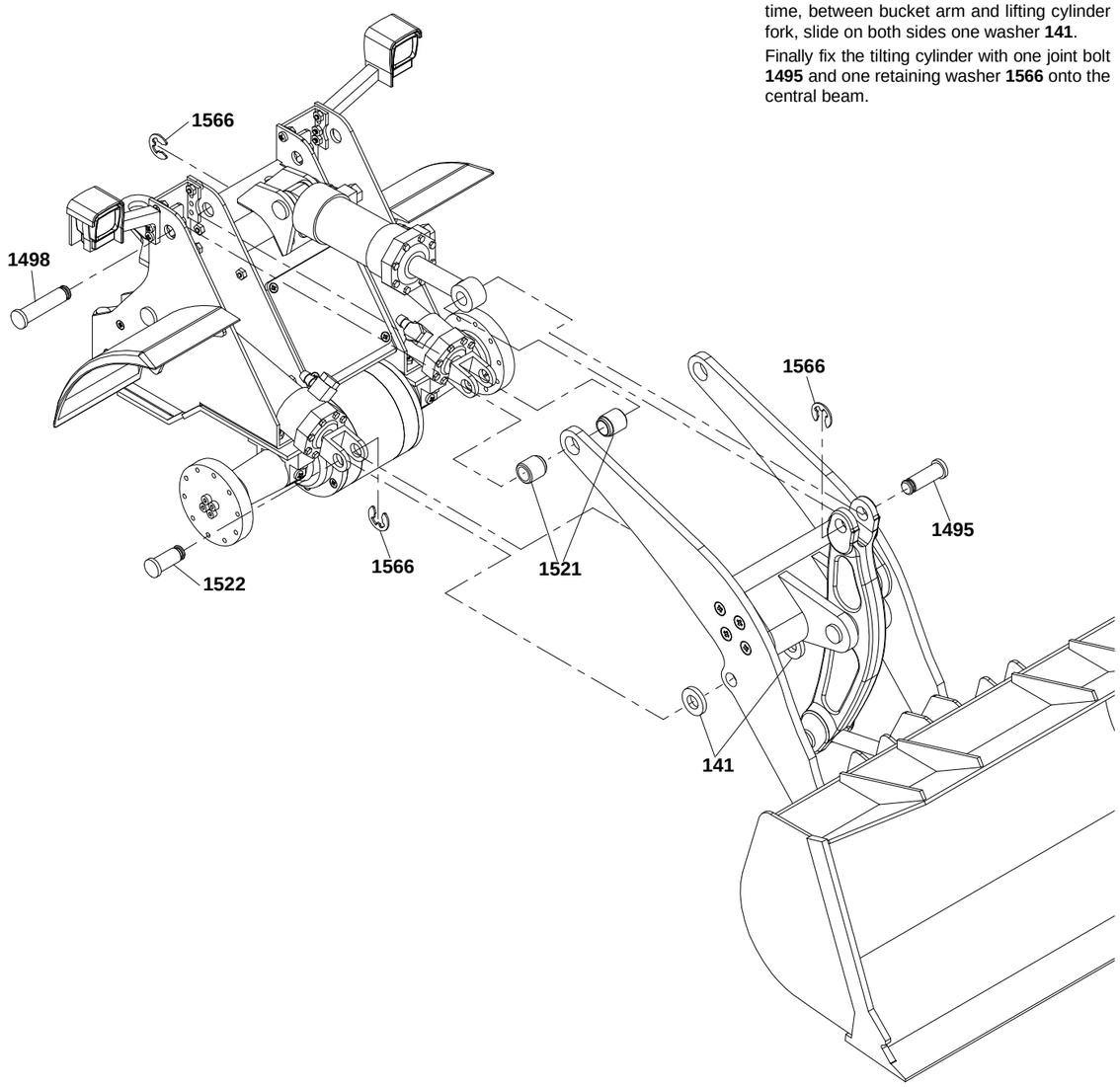
| Qty. | No. | Assembly part |
|---|---|---|
| 4 | **141** | Washer 6.1 x 12 x 2 (PA) |
| 1 | **1495** | Joint bolt ∅6 x 18.5 |
| 2 | **1498** | Joint bolt ∅6 x 26.2 |
| 4 | **1521** | Bearing bush, bucket arm |
| 2 | **1522** | Joint bolt ∅6 x 15.1 |
| 5 | **1566** | Retaining washer 5 |

**1495** M 1:1

**1498** M 1:1

**1522** M 1:1

**1521** M 1:1




S-3100-VW-8

## 9.3 Mounting the bucket arms onto the lifting- and tilting cylinders

Note: For reasons of a better overview, the drawing does not show the complete hind carriage. It is the right-hand side only which is shown of how to mount the bucket arms onto the four-plate loader tower; the attachment of the left-hand side bucket arm has to be done similarly.

From both sides, first press each one bearing socket **1521** into the holes on the end of the bucket arms. Accordingly to the illustration, fix the bucket arms with each one joint bolt **1498** and one retaining washer **1566** at the top between the side plates of the four-plate loader tower.

Afterwards fix the lifting cylinders with one joint bolt **1522** and one retaining washer **1566** onto the bucket arms; at the same time, between bucket arm and lifting cylinder fork, slide on both sides one washer **141**.

Finally fix the tilting cylinder with one joint bolt **1495** and one retaining washer **1566** onto the central beam.

# 10 Mounting the components belonging to the Set of Hydraulics, Art.-Nr. 3101

## 10.1 Preparation of the servos provided for the operation of the hydraulic cylinders

➔ ***When installing the Set of Hydraulics, Art.-No. 3101:***

Attention! The three eccenters of the valve control block **1564** are supplied as adjusted to "Zero" and fixed with knurled screws. Make sure not to misadjust these knurled screws!

Carefully shorten the arms of the servo levers (supplied with the servos). Clean the cut edges. Then insert the shortened servo levers into the recesses on the control eccenters.

Connect the servos to the receiver of your RC equipment, and start your transmitter up. Now set the precise adjustment of your RC unit to "zero"; the servos get automatically adjusted to "zero", too.

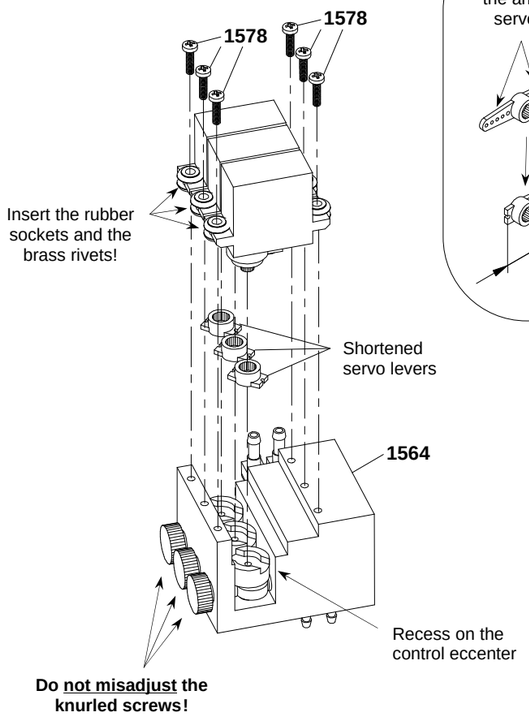
Now insert the rubber sockets and brass rivets (supplied with the servos) into the fixing holes therefore provided on the proper servos. Afterwards set the servos into the servo levers, and fix the units onto the control valve block with screws **1578**.

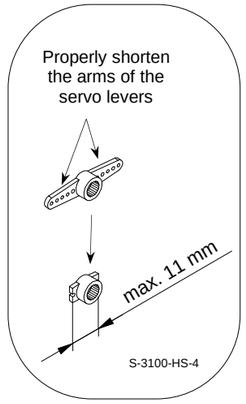
Finally remove the knurled screws from the valve control block, but keep the screws!

*Assembly step 10.1*

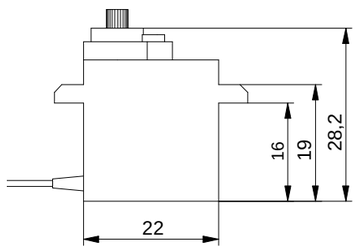
| Qty. | No. | Assembly part |
|---|---|---|
| 1 | **1564** | ∗ Control valve block |
| 6 | **1578** | ∗ Screw M2.5 x 8 |

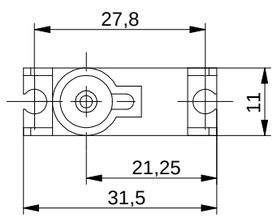
∗ *included in Art. 3101*




S-3100-HS-5




S-3100-HS-6

### Fitting types of servos

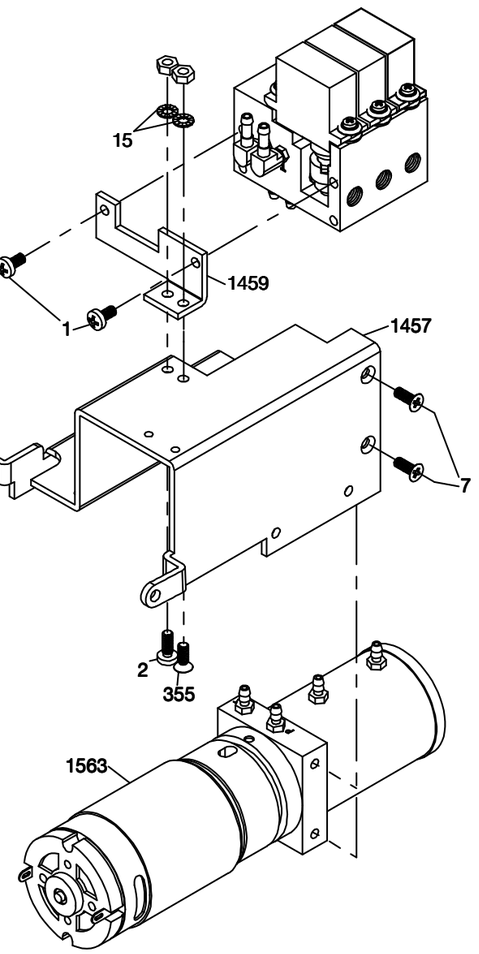
For the operation of the hydraulics, we recommend the servo S 3107 NANO made my the manufacturer robbe.

The measurements of this servo are shown at original size in the illustration. Important note: Only this size of servo will fit the valve control block.

If you intend using any other servo type, you either will have to check the compatibility (functions and accurate fit) by yourself, or to ask your dealer for advice.

***Set of Hydraulics, Art.-No. 3101***

***Set of Hydraulics, Art.-No. 3101***




S-3100-HS-1

## 10.2 Attachment of the hydraulic pump and the valve control block

➔ ***When installing the Set of Hydraulics, Art.-No. 3101:***

Following the illustration, mount the fixing angle **1459** onto the mounting plate **1457**; for this purpose use screw **2**, countersunk screw **355**, serrated washers **15** and nuts M3. Fix the hydraulic pump **1563** with screws **1** underneath the mounting plate.

Those hoses from the cylinders you previously have mounted inside the wheel-loader, now connect them to the nipples on the control valve block. Before you start cutting the hoses to length, please take into consideration that for maintenance purpose the mounting plate -along with the components belonging to the hydraulic set fixed hereto- will need to be drawn out of the hind carriage.

Use screws **1** to attach the valve control block along with the servos onto the fixing angle. Afterwards mount those hose connections still missing between the components of the hydraulic set.

*Assembly step 10.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **---** | ∗ Nut M3 |
| 4 | **1** | ∗ Screw M3 x 6 |
| 1 | **2** | ∗ Screw M3 x 8 |
| 2 | **7** | ∗ Countersunk screw M3 x 6 |
| 2 | **15** | ∗ Serrated washer 3.2 |
| 1 | **355** | ∗ Countersunk screw M3 x 8 |
| (1) | **1457** | Mounting plate for hydraulics/electrics |
| 1 | **1459** | ∗ Fixing angle, valve block |
| 1 | **1563** | ∗ Hydraulic pump 12V |

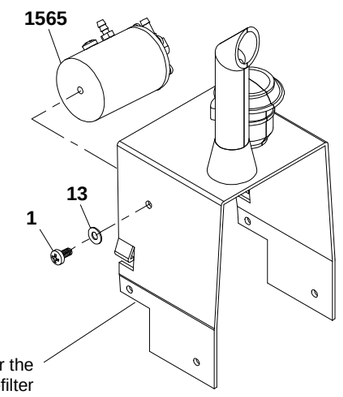
∗ *included in Art. 3101*

***Set of Hydraulics, Art.-No. 3101***

*Assembly step 10.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 1 | **1** | ∗ Screw M3 x 6 |
| 1 | **13** | ∗ Washer 3.2 |
| 1 | **1565** | ∗ Oil filter |

∗ *included in Art. 3101*




S-3100-HS-3

## 10.3 Attachment of the oil filter

➔ ***When installing the Set of Hydraulics, Art.-No. 3101:*** Attach the oil filter **1565** with screw **1** and washer **13** onto the inner side of the carrier provided for the exhaust and the air-filter.

NOTE: Prior to the installation of the single components belonging to the Set of Electrics, we recommend to fill the hydraulic system with oil, and (using either your RC equipment, or a servo tester) afterwards to check all functions of the cylinders; they probably will have to be re-adjusted. For this purpose provisionally fix both items -the carrier provided for the exhaust and the airfilter as well as the mounting plate- onto the hind carriage.

## 10 Mounting the components of the Set of Electrics, Art.-Nr. 3102

➔ ***When installing the Set of Electrics, Art.-No. 3102:***

Onto the fixing angle **1460** attach the following components belonging to the electrical system: the charging socket, the switch panel and the On/Off switch for the Hydraulics. Mount the fixing angle with screws **1413** onto the mounting plate for the Hydraulics/ Electrics.

Add the voltage regulator using screw **2**, insulating socket, insulating strip and nut M3 as shown in the illustration. Fix the PCB support **723** with two adhesive pads **655**.

NOTE: The two drawings below are showing those components which have to be attached on one hand underneath the carrier for the exhaust and the air-filter, and on the other hand onto the mounting plate for the Hydraulics/ Electrics.

Use two adhesive pads **655** to fix the PCB support **1570** to the right-hand side of the inner wall of the carrier provided for the exhaust and the air-filter. The control board for steering (without special PCB support) has to be placed below.

With two adhesive pads **655** add the receiver of your RC equipment onto the mounting plate for Hydraulics/Electrics.

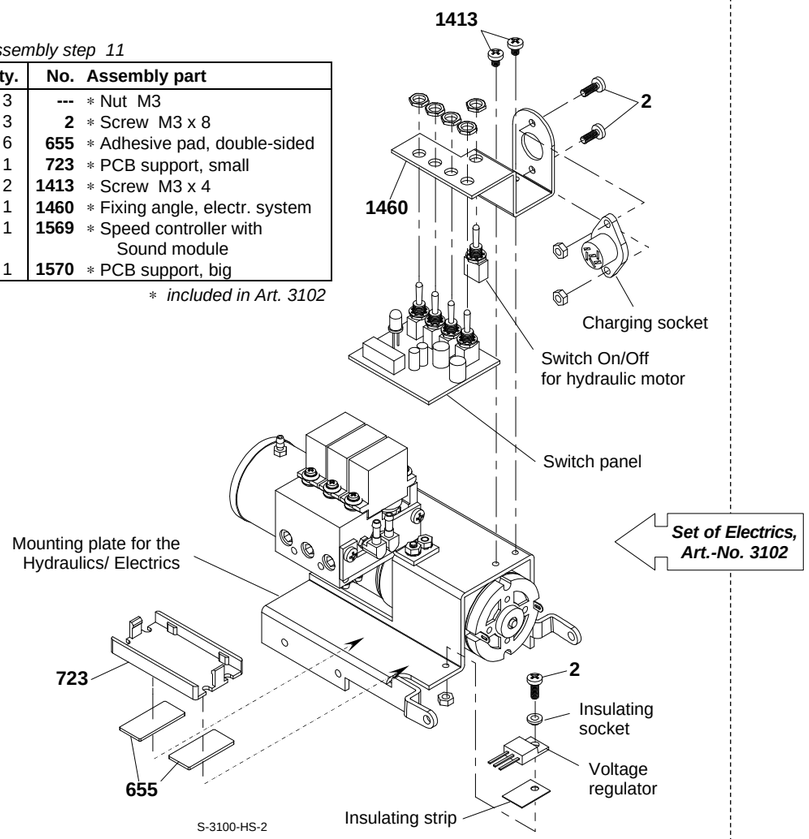
Set the speed controller **1569** in angled position onto the left-hand inner wall of the carrier provided for the exhaust and the air-filter. At this place the speed controller becomes fixed in clamping position between the carrier and the hydraulic pump.

**11**

*Assembly step 11*

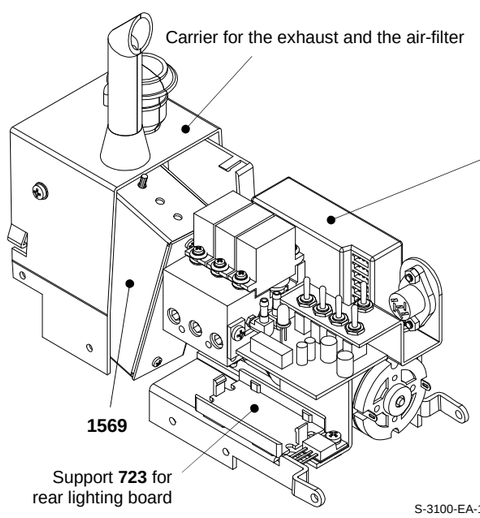
| Qty. | No. | Assembly part |
|---|---|---|
| 3 | --- | ∗ Nut M3 |
| 3 | **2** | ∗ Screw M3 x 8 |
| 6 | **655** | ∗ Adhesive pad, double-sided |
| 1 | **723** | ∗ PCB support, small |
| 2 | **1413** | ∗ Screw M3 x 4 |
| 1 | **1460** | ∗ Fixing angle, electr. system |
| 1 | **1569** | ∗ Speed controller with Sound module |
| 1 | **1570** | ∗ PCB support, big |

∗ *included in Art. 3102*



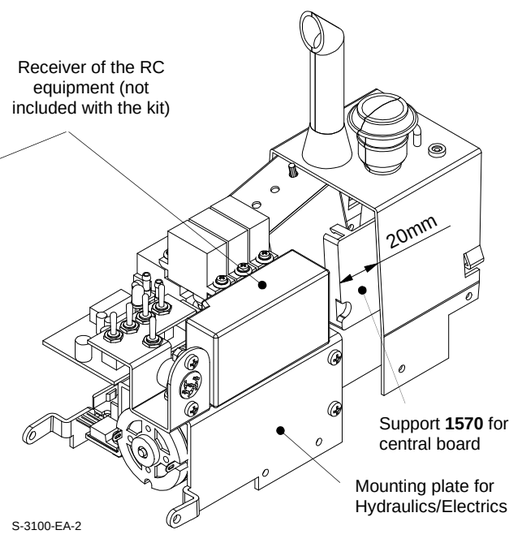

S-3100-HS-2

### View from the rear of the left-hand side




S-3100-EA-1

### View from the rear of the right-hand side




S-3100-EA-2

## Completion of the hind carriage

### 12.1 Mounting the motor hood

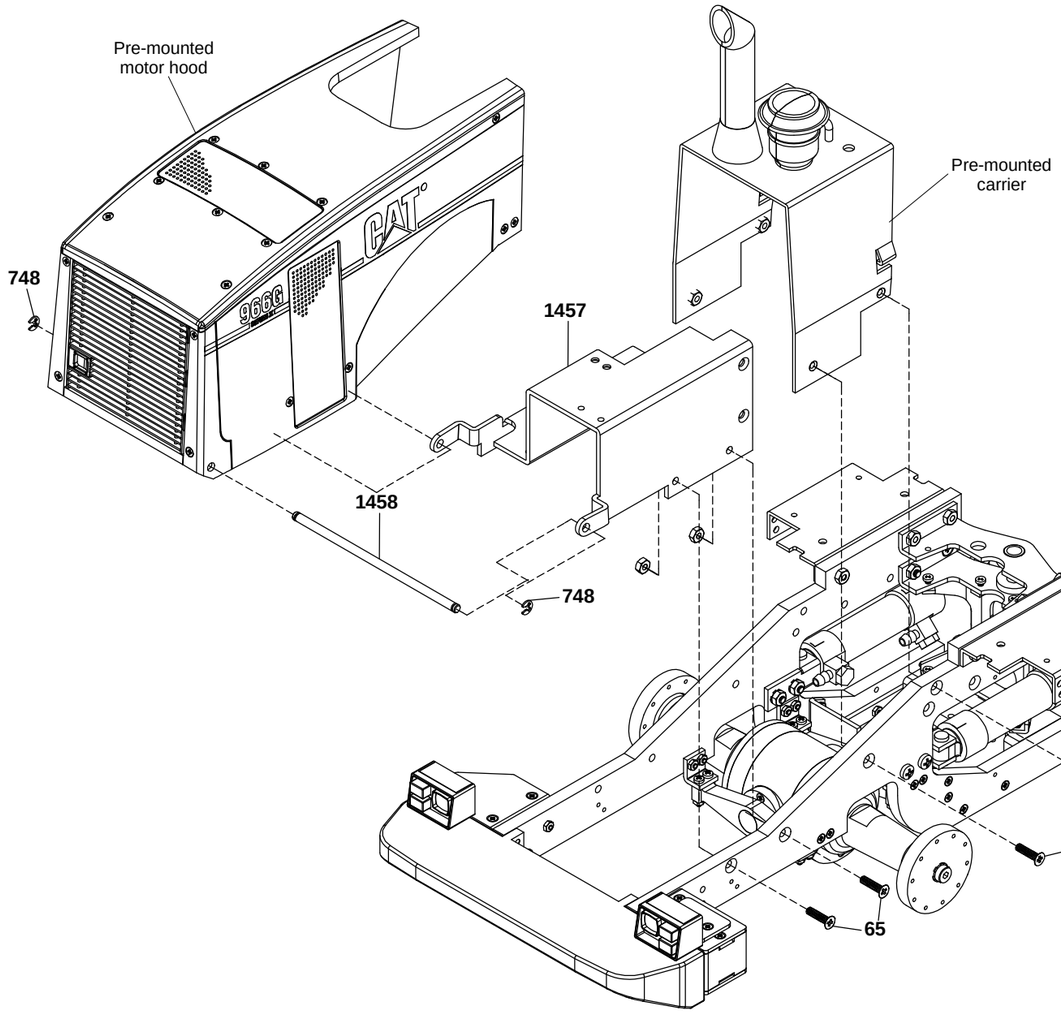
NOTE: In order to get a better overview, the lateral fittings of the hind carriage as well as the complete front carriage are not shown in this drawing. The attachment with screws is shown for the right-hand side only; similarly attach the parts on the left-hand side.

First attach the pre-mounted carrier (assembly step 2.1) onto the hind carriage; for this purpose use countersunk screws **65** and nuts M3.

Slide the hinge shaft **1458** through the lateral holes on the pre-mounted motor hood, as well as through the mounting plate provided for the Hydraulics/Electrics **1457**; fix it with two retaining washers **748**. Finally attach this unit with countersunk screws **65** and nuts M3 onto the hind carriage.

*Assembly step 12.1*

| Qty. | No. | Assembly part |
|---|---|---|
| 4 | **20040** | Nut M3 |
| 8 | **65** | Countersunk screw M3 x 12 |
| 2 | **748** | Retaining washer 2.3 |
| 1 | **1457** | Mounting plate for hydraulics/electrics |
| 1 | **1458** | Hinge shaft for hood |




S-3100-MH-4

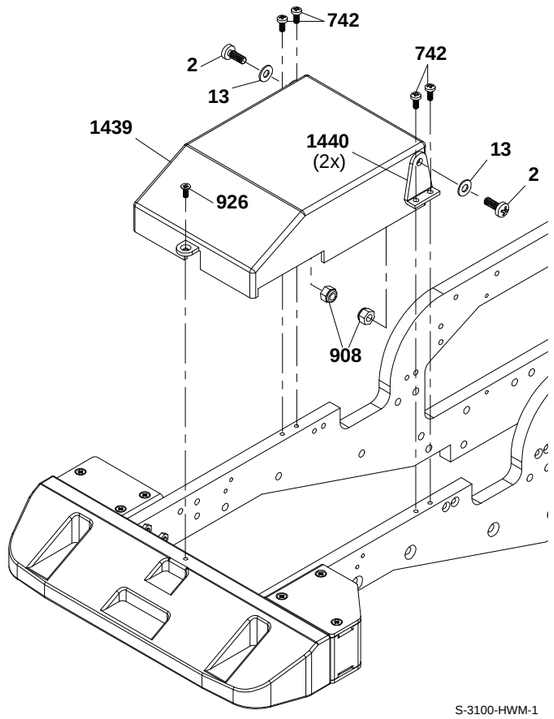
S-3100-EMO-4

## 12.2 Battery box

NOTE: In order to get a better overview, the illustration shows both lateral frames, and the bumper along with the attached boxes only, but not all of those premounted components belonging to the hind carriage.

The battery box is tiltable and has to be attached underneath the hind carriage. Both supports **1440** will have to be fixed onto the sides of the battery box **1439**; for this purpose use each one screw **2**, washer **13** and stop nut **908**. Do not tighten the stop nuts: the battery box needs a certain play between both supports.

Fix the supports on the battery box to the frames using screws **742**, while the bracket of the battery box has to be fixed to the bumper with countersunk screw **926**.




S-3100-HWM-1

*Assembly step 12.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **2** | Screw M3 x 8 |
| 2 | **13** | Washer 3.2 |
| 4 | **742** | Screw M2 x 5 |
| 2 | **908** | Stop nut M3 |
| 1 | **926** | Countersunk screw M2 x 5 |
| 1 | **1439** | Battery box |
| 2 | **1440** | Support for battery box |

## 12.3 Mounting the handrail onto the right-hand side

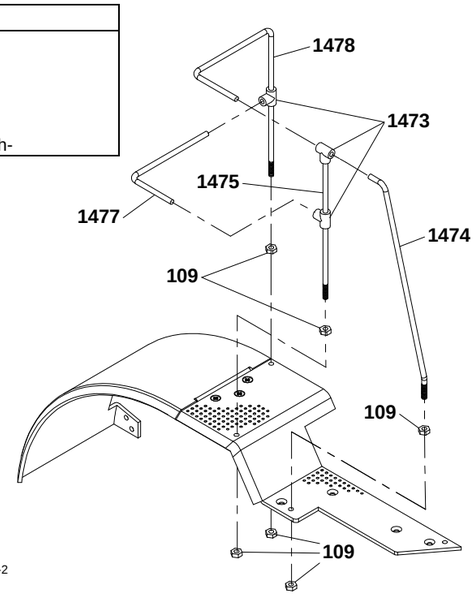
Note: For reasons of a better overview, of those components already premounted the illustration includes the stepboard and the fender only.

Once you have slid one T-piece **1473** onto the right-hand railing frame **1478** (see drawing), add each one nut **109** onto the thread end of the railing frame, the railing post **1475** as well as onto the handrail **1474**. Again: Turn the nuts for several times up and down until they become easy to add.

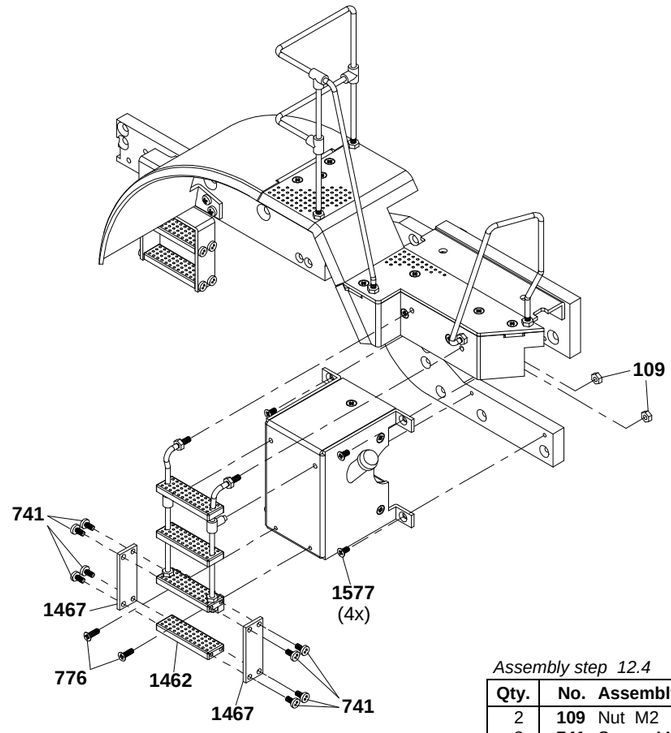
Use each one further nut **109** to fix the three parts onto the stepboard. Now tighten the nuts! As shown in the illustration, finally slide two T-pieces onto the railing post, insert the centre frame **1477**; use glue to fix all components properly.

*Assembly step 12.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 6 | **109** | Nut M2 |
| 3 | **1473** | T-piece, open |
| 1 | **1474** | Handrail, rear |
| 1 | **1475** | Railing post |
| 1 | **1477** | Centre frame |
| 1 | **1478** | Railing frame, -rh- |




S-3100-HWR-2




S-3100-HWR-6

## 12.4 Attachment of the tank housing and the ladder onto the right-hand side

Note: For reasons of a better overview, of those components for the hind carriage you already have premounted, the drawing shows the following items only: the right-hand frame and the carrier for cab and entrance along with the attached parts.

Start by fixing the pre-mounted tank housing with countersunk screws **1577** onto the right-hand frame side.

Insert the upper thread ends of the ladder into the upper holes of the protection plate on the hind carriage which are provided therefore; then insert the T-pieces into the upper holes on the tank housing. Now, that ladder step equipped with the fixing links has to be fixed onto the lower holes on the tank housing; use countersunk screws **776** for this purpose. With each one further nut **109** fix the ladder from the inside onto the protection plate. Should one of these parts remain loosely, please use a bit of glue to fix it properly.

As shown in the illustration, fix both side plates **1467** and the step **1462** (with lateral holes) with screws **741** onto the bottom of the ladder unit.

*Assembly step 12.4*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **109** | Nut M2 |
| 8 | **741** | Screw M2 x 4 |
| 2 | **776** | Countersunk screw M2 x 6 |
| 1 | **1462** | Step with lateral holes |
| 2 | **1467** | Side metal sheet for steps |
| 4 | **1577** | Countersunk screw M2 x 4 |

## 12.5 Mounting the handrail onto the left-hand side

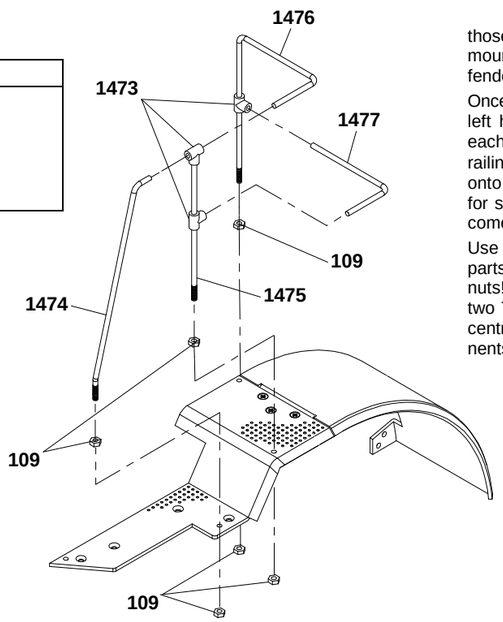
Note: For reasons of a better overview, of those components you previously have mounted, it is just the stepboard and the fender which are shown in the drawing.

Once you have slid one T-piece **1473** onto the left handrail frame **1476** (see drawing), add each one nut **109** onto the thread end of the railing frame, the railing post **1475** as well as onto the handrail **1474**. Again: Turn the nuts for several times up and down until they become easy to add.

Use each one further nut **109** to fix the three parts onto the stepboard. Now tighten the nuts! As shown in the illustration, finally slide two T-pieces onto the railing post, insert the centre frame **1477**; use glue to fix all components properly.

*Assembly step 12.5*

| Qty. | No. | Assembly part |
|---|---|---|
| 6 | **109** | Nut M2 |
| 3 | **1473** | T-piece, open |
| 1 | **1474** | Handrail, rear |
| 1 | **1475** | Railing post |
| 1 | **1476** | Railing frame, -lh- |
| 1 | **1477** | Centre frame |




S-3100-HWL-3

## 12.6 Fixing the ladder onto the left-hand side

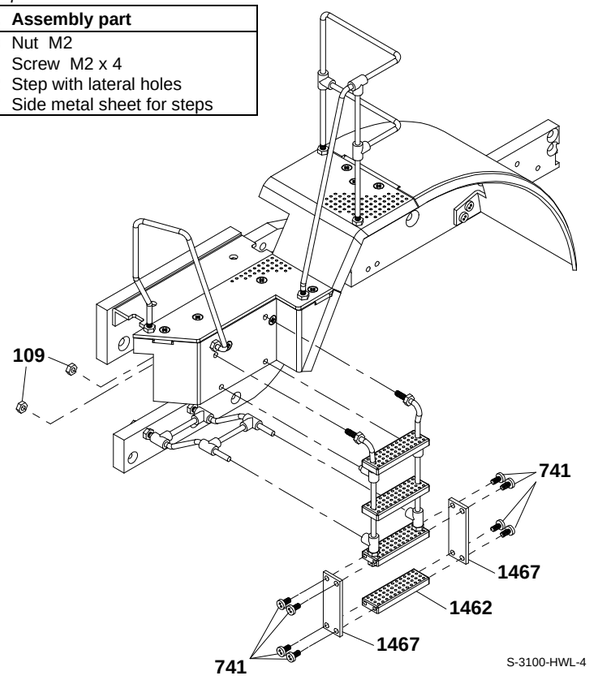
Note: For reasons of a better overview, of those components for the hind carriage you already have premounted, the drawing shows the following items only: the left-hand frame and the carrier for cab and entrance along with the attached parts.

Insert the upper thread ends of the ladder into the upper holes therefore provided, and the upper T-pieces into the corresponding lower holes on the protection plate. Press the lower T-pieces onto the ends of the supporting ladder. With each one further nut **109** fix the ladder from the inside onto the protection plate. Should one of these parts remain loosely, please use a bit of glue to fix it properly.

As shown in the illustration, fix both side plates **1467** and the step **1462** (with lateral holes) with screws **741** onto the bottom of the ladder unit.

*Assembly step 12.6*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **109** | Nut M2 |
| 8 | **741** | Screw M2 x 4 |
| 1 | **1462** | Step with lateral holes |
| 2 | **1467** | Side metal sheet for steps |



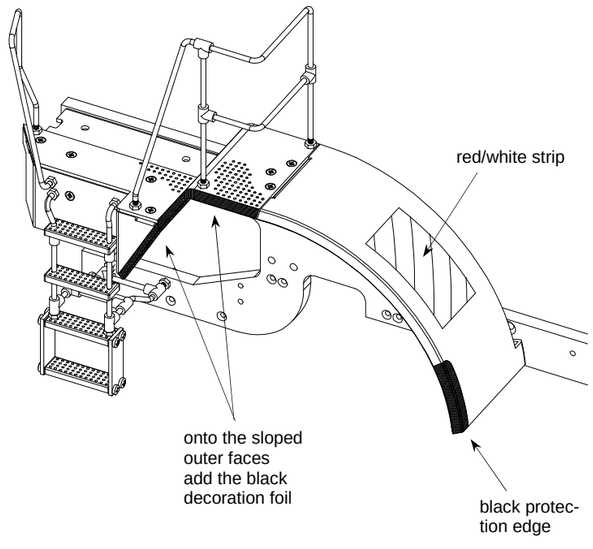

## 12.7 Application of the decals

Note: For reasons of a better overview, of those components for the hind carriage you already have premounted, the drawing includes the following items only: the left-hand frame and the carrier for cab and entrance along with the attached parts.

Add black stripes to the sloped outer faces on the step plate and the protection plate. The sufficient width of the stripes allow to draw it inwards by approx. 2mm to 3 mm over the side edge of the panels.

Similarly equip the rear fender at the outside bottom with a black protection edge. Accordingly to the drawing add a fitting red/white stripe, cut to size (approx. 57mm of length).

In the same sense, add the decals to the right-hand wheel-loader side which is not included with the drawing.




## 13 Mounting the wheels

*Assembly step 13*

| Qty. | No. | Assembly part |
|---|---|---|
| 1 | **1172** | Allen wrench 1.5 |
| 8 | **1558** | Rim, CAT |
| 4 | **1559** | Bushing for rim |
| (4) | **(1560)** | Rim adapter CAT (already mounted to the diffs) |
| 4 | **1561** | Tyre "Goodyear" |
| (16) | (**1567**) | Allen screw M2 x 8 (already mounted to the diffs) |
| 40 | **1568** | Allen screw M2 x 10 |

**Note!**

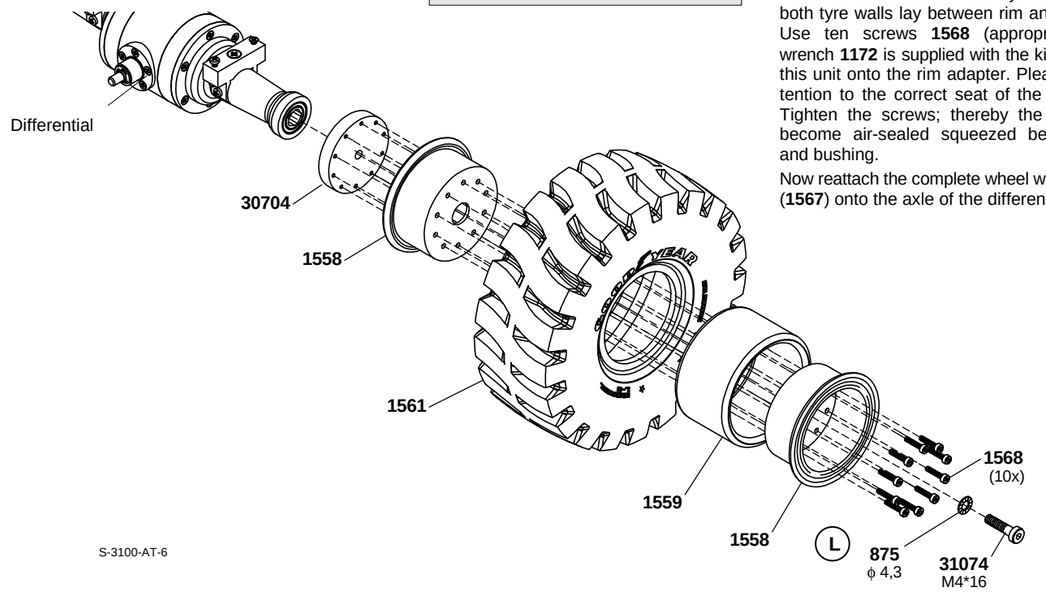
(L) As soon as you have completed the assembly, on those screw connections marked by "L" add a bit of clear varnish (e. e. nail varnish) to the **screw heads** in order to **secure** them firmly.

For reasons of security (the ball bearing sitting behind is not fixed), we supply the rim adapters (**1560**) already fixed to the differentials. First, dismount each of these rim adapters.

NOTE: Both tyre depths are not exactly symmetrical (difference of approx. 2 mm). During the mounting, please make sure that the outwards facing tyre sides are identical.

In order to start the wheel assembly, slide one bushing **1559** into the tyre; position it that way that both tyre walls will sit exactly centrally on the bushing. Afterwards press each one rim **1558** into both tyre sides. Now, both tyre walls lay between rim and bushing. Use ten screws **1568** (appropriate Allen wrench **1172** is supplied with the kit) to mount this unit onto the rim adapter. Please pay attention to the correct seat of the tyre walls. Tighten the screws; thereby the tyre walls become air-sealed squeezed between rim and bushing.

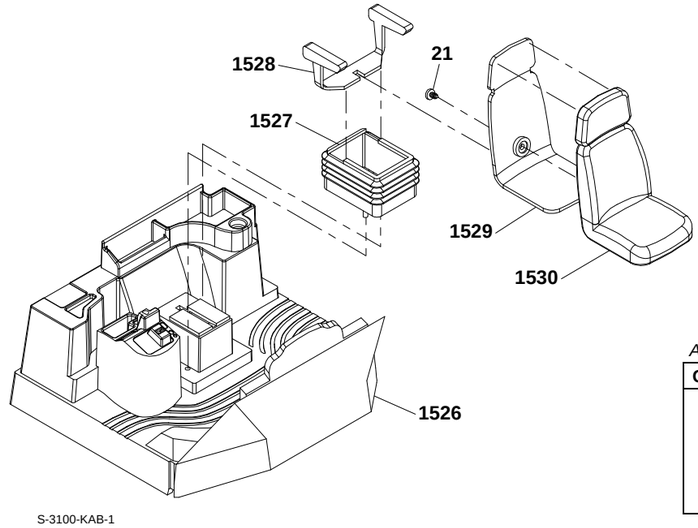
Now reattach the complete wheel with screws (**1567**) onto the axle of the differential.




## 14 Mounting the cab

### 14.1 Lower part

Start by fixing the seat **1529** with one tapping screw **21** onto the seat upholstery **1530**. The arm chairs **1528** offer a groove which fits the stay on the seat; glue both components onto the seat base **1527**. The pins at the bottom of the base match the corresponding holes on the cab floor **1526**; fix the base with glue onto the cab floor.




*Assembly step 14.1*

| Qty. | No. | Assembly part |
|---|---|---|
| 1 | **21** | Tapping screw 2.2 x 4.5 |
| 1 | **1526** | Cab floor, top |
| 1 | **1527** | Base for seat |
| 1 | **1528** | Armrest |
| 1 | **1529** | Seat |
| 1 | **1530** | Seat upholstery |

## 14.2 Operator controls

The steering rod belonging to the steering wheel **1535** offers a groove which fits a corresponding stay on the centre part of the dashboard **1531**. This serves for the exact positioning of both parts.

Now glue the following parts together: the steering wheel onto the dashboard, the dashboard itself onto the fore vertical flattering on the cab floor, then the tilting control lever **1532**, the lifting control lever **1533**, and the wrist rest **1534** onto the control lever console on the right-hand side of the seat.

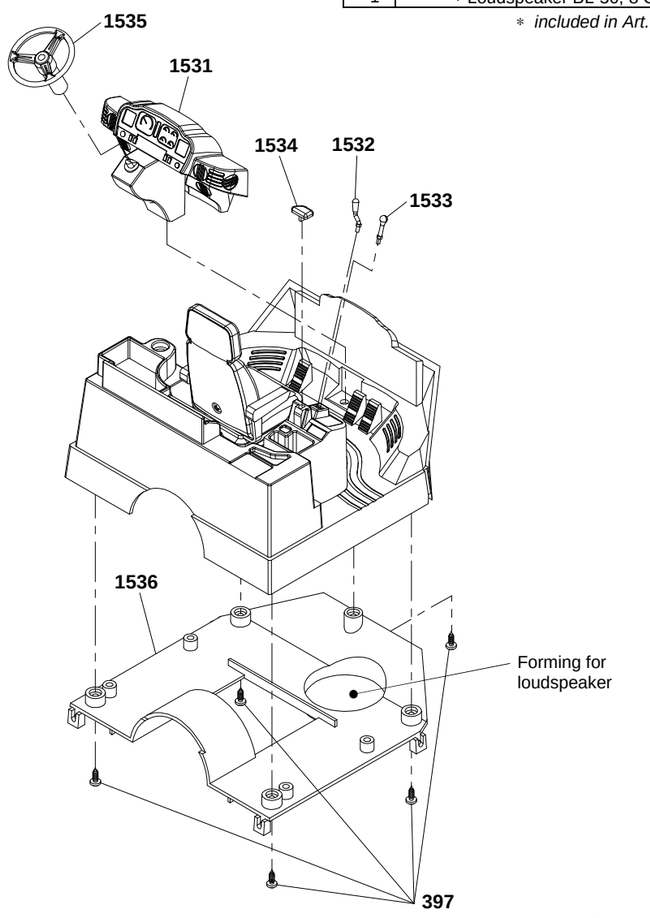
➔ ***When installing the Set of Electrics, Art.-No. 3102:*** Both, the upper and lower cab floor parts include a forming which serves to catch the loudspeaker.

Finally, with tapping screws **397** fix the lower cab floor **1536** underneath the upper cab floor.

*Assembly step 14.2*

| Qty. | No. | Assembly part |
|---|---|---|
| 5 | **397** | Tapping screw 2.2 x 6.5 |
| 1 | **1531** | Dashboard |
| 1 | **1532** | Tilting control lever |
| 1 | **1533** | Lifting control lever |
| 1 | **1534** | Wrist rest |
| 1 | **1535** | Steering wheel |
| 1 | **1536** | Cab floor, bottom |
| 1 | **---** | ∗ Loudspeaker BL-50, 8 Ohm |

∗ *included in Art. 3102*



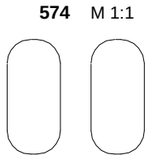

S-3100-KAB-2

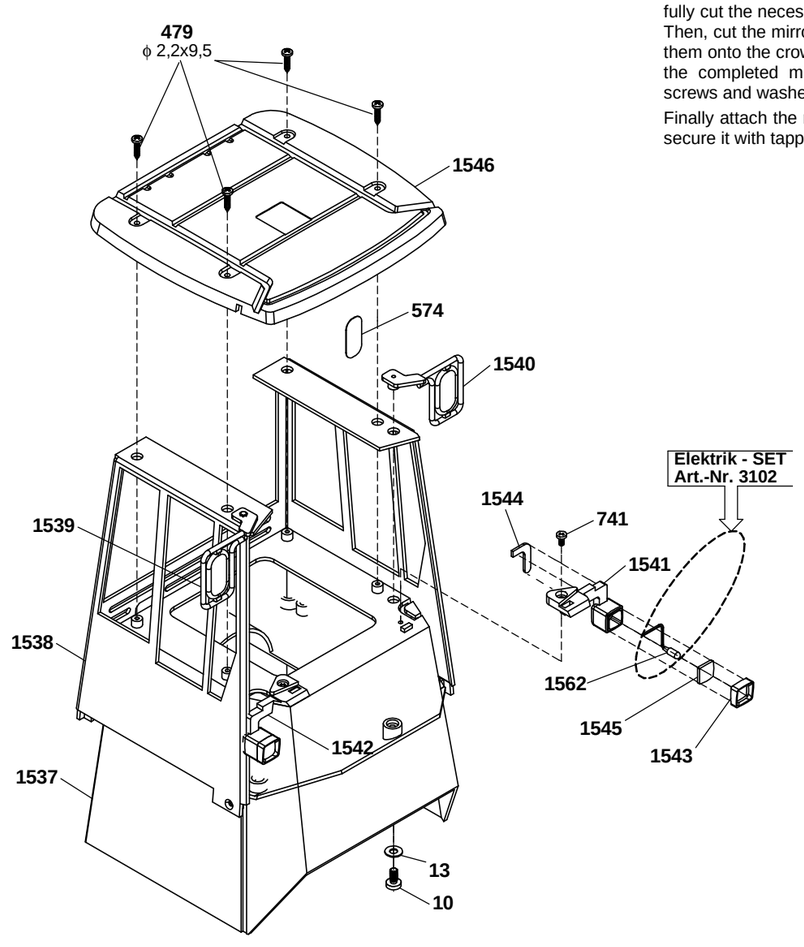
*Assembly step 14.3*

| Qty. | No. | Assembly part |
|---|---|---|
| 2 | **10** | Self-cutting screw M3 x 6 |
| 2 | **13** | Washer 3.2 |
| 4 | **479** | Tapping screw 2.2 x 9.5 |
| 2 | **574** | Mirror foil |
| 2 | **741** | Screw M2 x 4 |
| 1 | **1537** | Glass cab |
| 1 | **1538** | Metal cab |
| 1 | **1539** | Rear mirror, -rh- |
| 1 | **1540** | Rear mirror, -lh- |
| 1 | **1541** | Lamp support, cab, -rh- |
| 1 | **1542** | Lamp support, cab, -lh- |
| 2 | **1543** | Lamp frame, cab |
| 2 | **1544** | Cable cover, lamp support/cab |
| 2 | **1545** | Lens, cab |
| 1 | **1546** | Roof, cab |
| 2 | **1562** | ∗ Bulb 5V |

∗ *included in Art. 3102*

**574** M 1:1






S-3100-KAB-3

## 14.3 Cab unit with lamps, mirrors and roof

➔ ***When installing the Set of Electrics, Art.-No. 3102:*** First insert the bulbs **1562** into the lamp supports **1562**. The lamp supports include a cable channel, and the operator cab offers special grooves provided for the bulb wires to be led through to the circuit board. Please be careful not to squeeze the bulb wires as this may cause a short circuit.

From the rear, insert one lamp lens **1545** into the lamp frame **1543**; fix both parts with glue onto the right-hand lamp support **1541**. Use one cover **1544** to close the cable channel and fix the cover with a bit of glue. Set the lamp support correctly onto the glass cab **1537** and fix it with one screw **741**.

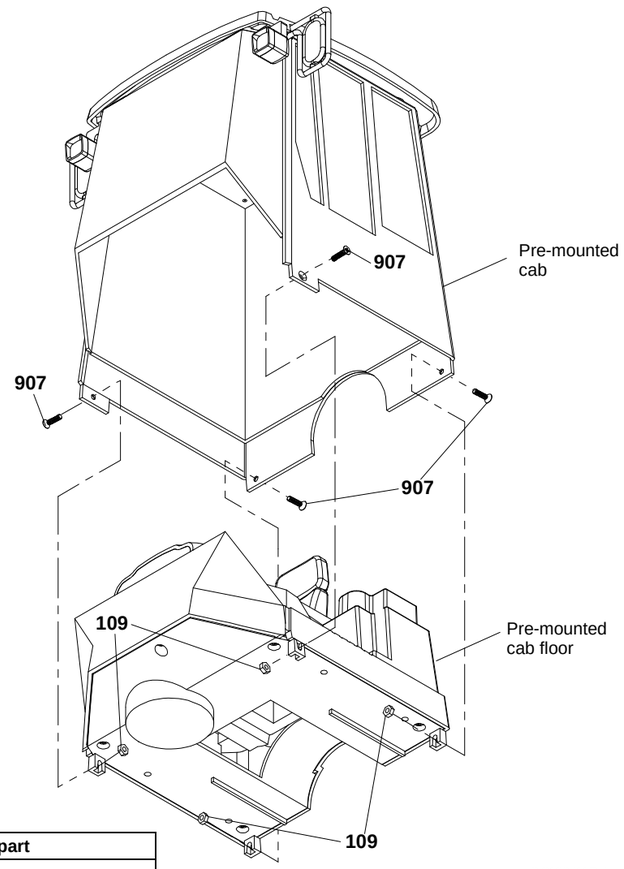
Now, use the same parts similarly to mount the left-hand lamp support **1542**.

Slide the metal cab **1538** over the glass cab. Before you start adding the rear mirrors **1539** and **1540**, with self-cutting screws **10** carefully cut the necessary threads into the holes. Then, cut the mirror foils **574** to size and glue them onto the crowned side of the mirrors; fix the completed mirrors with the self-cutting screws and washers **13** onto the cab.

Finally attach the roof **1546** onto the cab and secure it with tapping screws **397**.

## 14.4 Attachment of the cab to pre-mounted cab floor

Use countersunk screws **907** and nuts **109** to fix the complete cab onto the pre-mounted cab floor.




*Assembly step 14.4*

| Qty. | No. | Assembly part |
|---|---|---|
| 4 | **109** | Nut M2 |
| 4 | **907** | Countersunk screw M2 x 8 |

S-3100-KAB-4

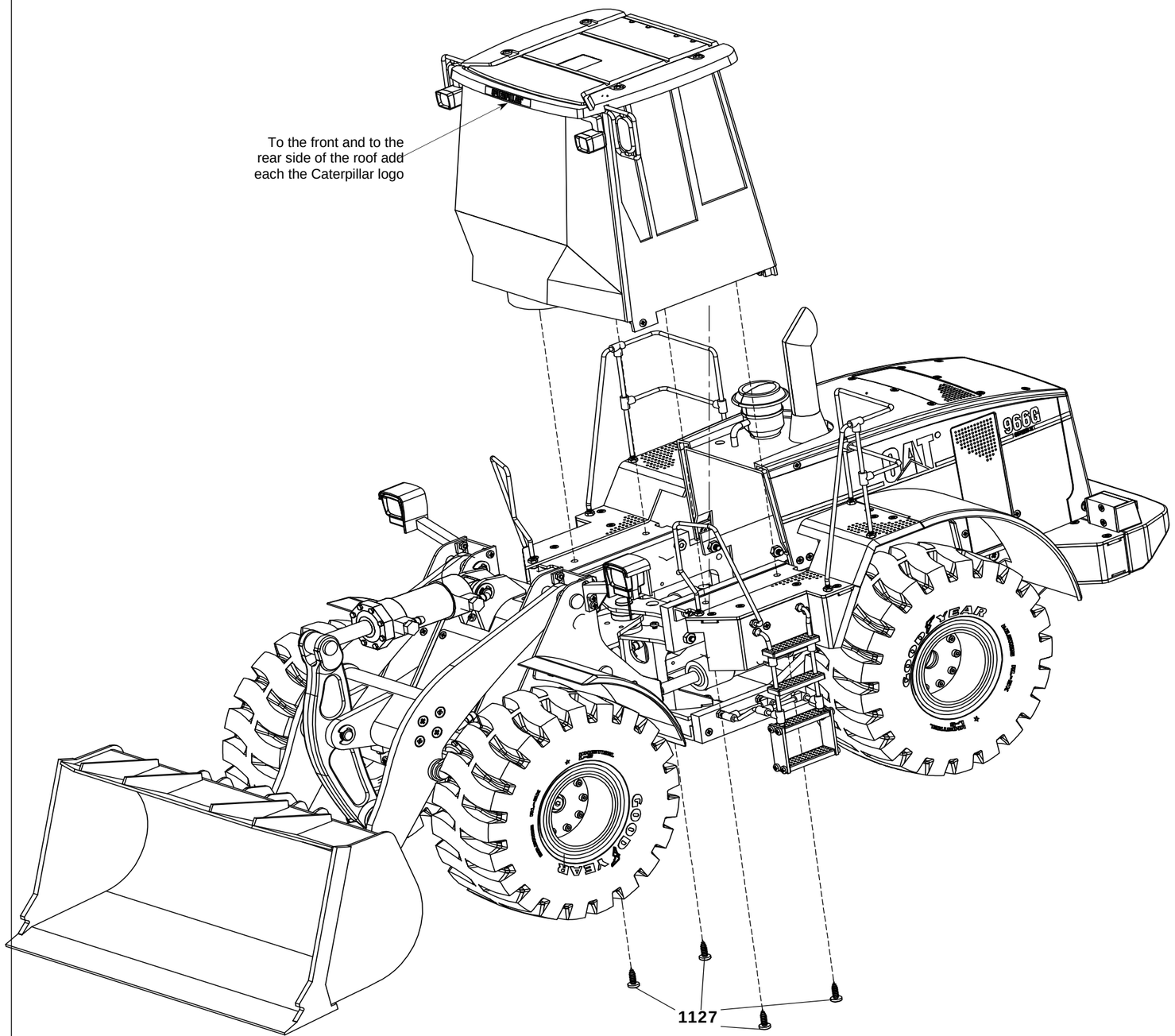
*Assembly step 14.5*

| Qty. | No. | Assembly part |
|---|---|---|
| 4 | **479** | Tapping screw 2.2 x 9.5<br>or ∅2,2 x 12 |

## 14.5 Attachment of the cab to the hind carriage

First glue the Caterpillar logo to each of the front and rear roof sides.

On the carriers between the step boards, the complete cab unit will be positioned. The seat is correct as soon as the unit is no longer moveable. From underneath, fix the cab with tapping screws **479**.




S-3100-EMO-4