eVEDICO ASSEMBLY INSTRUCTION

Technical data: Truck tractor: Lenath. . 175 mm Width 265 mm Track (tread) front 140 mm Track (tread) rear... .. 116 mm Weight with motor drive and NiCads...... 3.5 kg Superstructure: Components of die cast aluminium and aluminium sheet, stainless steel threaded connectors and bending wire components, high impact plastic components. Cab tiltable. Model is prepared for RC-installation. B-57-0

Complete Kit MAN Driving model "C"

Art.-No. 57 white Art.-No. 58 red Art.-No. 59 black

Technical data

Drive Motor: WEDICO-Bühler electric motor, rated voltage

12 volts, 7-segment collector. Idling speed 6000 rpm. Torque 5 Ncm (approx. 500 pcm) at 4000 rpm. Power drawn under load at max. torque approx. 3 A. Idling power consumption with connected gearing

and one differential approx. 0.5 A.

Standard single speed 2-stage spur gearbox with Gearbox

self-lubricating gearwheels. Reinforced housing.

Gear ratio 5.6:1.

Power transmission

Stainless steel drive shafts with ball joints between gearbox and differential. Differential gear.

Gear ratio 2 : 1.

Superstructure Frame made of aluminium section, 2 mm thick; tor-

Rear bumper made of section 2 mm thick.

3-part (rear) to 4-part (front) stainless steel leaf

spring packages on all axles.

Soft rubber tires with reproduction of original tread

Fastening components made of stainless steel. All body parts are made from aluminium sheet and

aluminium die cast 1.5 to 2 mm thick.

Finish

Assembly

Extremely hard epoxy powder coating. Excellent base when repainting for special purposes.

During assembly it is advisable following the sequence given by these instructions. Observe the notes explaining the various steps in assembly and use only those parts which are provided; this will

insure a correct result of assembly.

WEDICO system kits are known for their exact fit.

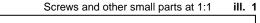
We are glad that you have decided on one of the precious WEDICO truck models! For the manufacture of individual parts WEDICO uses durable materials of high quality - rarely to find in these days. This guarantees durability and enjoyment of your model for years to come.

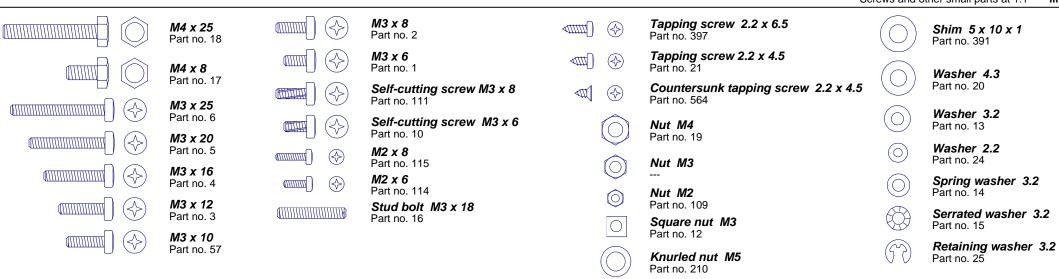
If you should ever require <u>replacement parts</u>, please get in touch with your dealer or directly with WEDICO. For order purpose it is important using not only those EDP-numbers mentioned within the general parts list (see last page of this instruction) but also indicating the necessary details concerning colour, quantity and exact term of the spares required. You may be assured that WEDICO will supply the replacement part as quick as possible.

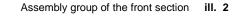
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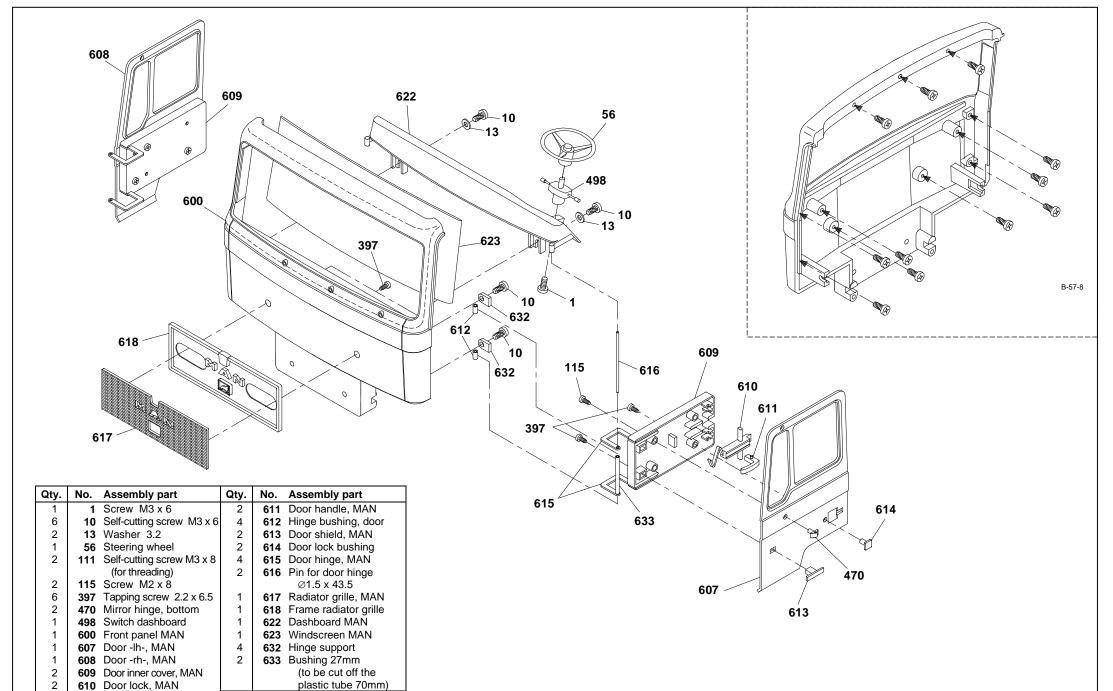
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Complete Kit MAN Completion of assembly groups

1 General

1.1 The assembly instruction

On the left side you find the illustrations of the assembly groups including the part lists indicating the necessary components. On the right side, marked by the corresponding number of illustration, the instructions for the proper assembly.

1.2 Screws and other small parts

M3 nuts are generally not provided with an identification number. As a help easier to find out screws and small parts, please see ill. 1 which is showing you the most important components at original size.

1.3 Cutting threads

Threads have to be cut into eleven of the screw holes on the front panel (see ill. 2 on the right-hand top side), as well as into the four lateral screw holes on the underside of the roof, and into both screw holes on the side panels. Before you start the proper assembly, use those two self-tapping screws 111 supplied with this kit to cut these threads. You should lubricate the screw and the screw holes (using a little petroleum jelly, for instance) before doing so and afterwards use a soft cloth to remove excess lubricant.

2 Assembly group of the front section

2.1 Assembly of the doors

Into the inner cover of the left door lay one door lock 610 and two door hinges 615. Press the mirror support 470, the door shield 613 as well as the door lock bushing 614 into the corresponding openings of the left door 607. Then insert the door handle 611 from inside into the corresponding opening of the door and screw up the inner door cover with the proper door using two screws 397 and one screw 115. From the enclosed plastic tube cut off a piece of 27mm length. The bushing you have thereby made is indicated in the illustration by 633. From underneath press then the pin for door hinge 616 into the proper door hinge. First slide the bushing 633 and afterwards one of the door hinge bushings 612 between both door hinges onto the door hinge pin and press now the door hinge pin into the upper door hinge. Slide now the second door hinge bushing 612 onto the bottom part of the hinge pin.

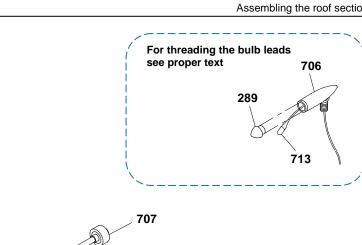
Prepare now the right door 608 by the same way.

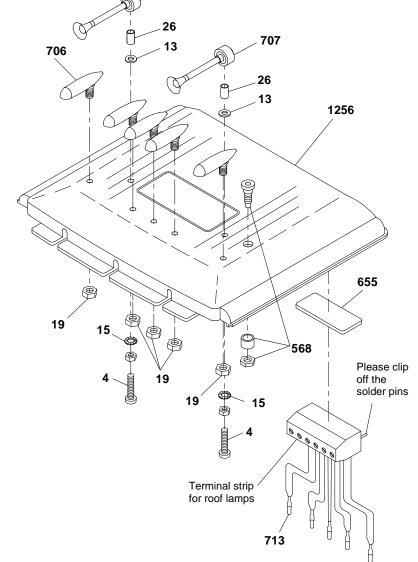
2.2 Assembling radiator, front panel, steering wheel, doors

Use two screws 397 to fix the radiator grille 617 as well as the grille frame 618 onto the front panel 600 and press the front screen 623 into the front panel. For this purpose lay the screen into the opening on the left inner side of the front panel and bend it on its centre point backwards until the screen may laid as well into the right side. Press then the screen frontwards onto the front panel. The screen should

With screw 1 add now the dashboard switch 498 as well as the steering wheel 56 onto the dashboard 622. Slide the door hinge pins with the pre-mounted doors into the bushings lateral of the dashboard. With screws 10 and washers 13 fix then the proper dashboard with the doors onto the front panel. Screw the door hinge pins with the attached bushings 612, with hinge supports 632 and screws 10 onto the front panel. Adjust the doors until they lay - when closed - in parallel to the front panel and to the roof. For this purpose lightly bend the aluminium door hinges as follows: squeeze the upper hinges a bit together, and push a bit the bottom hinges apart.

Assembling the roof section ill. 3





	Qty.	No.	Assembly part Qty. No. Assembly part						
Ī	2		Nut M3	1	655	Adhesive pad,			
	2	4	Screw M3 x 16			double-sided			
	2	13	Washer 3.2	5	706	Roof lamp, chromed			
	2	15	Serrated washer 3.2	2	707	Horn			
	5	19	Nut M4	5	713	Bulb 3V			
	2	26	Bushing 4 x 0.5 x 7	1	1256	Roof, Complete Kit			
	5	289	Lens for roof lamp,			MAN "C"			
			orange	1		Terminal strip for roof			
	1	568	Antenna socket,			lamps, 6-pole			
Į			complete						

Complete Kit MAN Completion of assembly groups

3 Assembling the roof section

3.1 Antenna socket and horns

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.

The horns 707 are fitted with bushings 26 and washers 13 and then affixed, through the holes provided in the roof 1263, using screws 4, nuts M3 and serrated washers 15.

3.2 Roof lamps

Rear panel section

Install a bulb 713 in each of the roof lamps 706, threading the leads through the lamp housings first. The cables are easier to thread if you twist the two conductors together and bend the ends slightly. Pointed tweezers can help in pulling the cable through. Do not pull the bulbs too far into the lamp housings; the bulbs should protrude by 2 to 3 mm. After the roof lamp lenses 289 have been pressed onto the lamp housings, the housings are inserted in the holes in the roof and secured with nuts 19.

The bulb leads and the red/black cable from the switch panel are attached to the terminal strip - see Section 23.3 and ill. 23. Use adhesive pads 655 to affix the terminal strip under the roof so that the cables are not visible inside the cab.

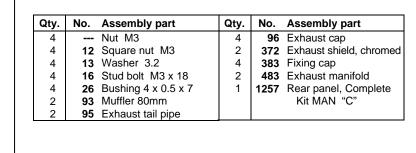
4 Rear panel section

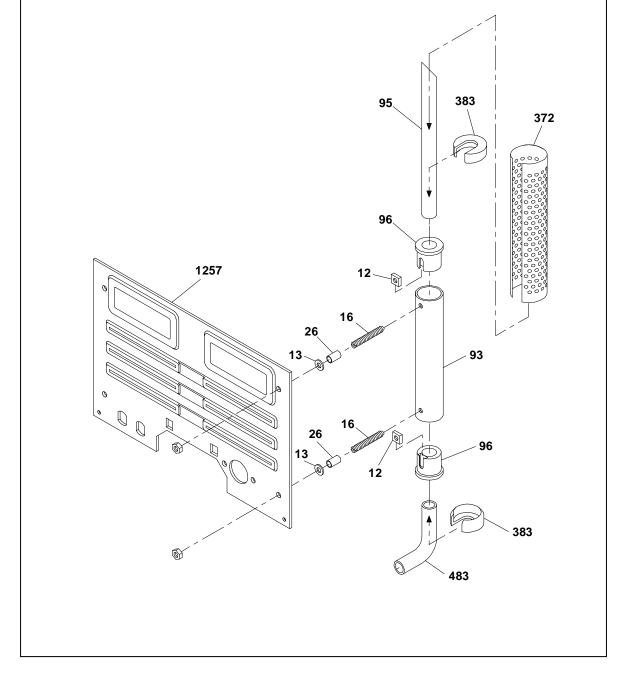
4.1 Assembling the exhaust system

The illustration is showing the assembly of the left side only. Please mount the right side in the same sense.

Slide one square nut 12 each into the depressions at the exhaust caps 96. Now slide these caps into the muffler 93 so that the nut is located behind the hole. Slide the exhaust tail pipe 95 from above into the muffler cap until catching; clamp it in place with a stud 16. Ensure that the tip of the exhaust pipe points is aligned with the nut. Follow the same procedure for the exhaust manifold 483. Its lower opening must also be aligned with the nut. Then a bushing 26 and washer 13 are slid onto the two studs.

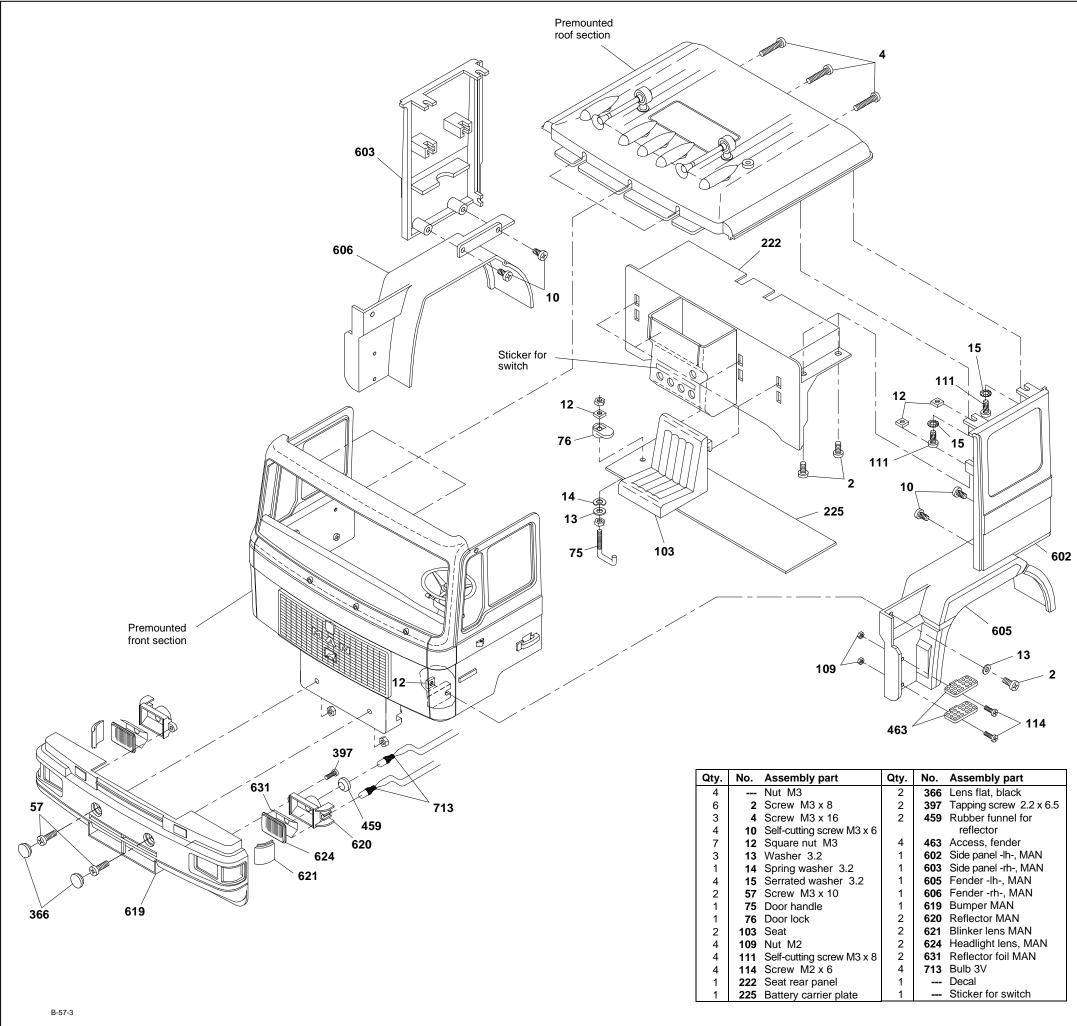
Now use the stud bolts to insert the exhaust system through the mating holes at the rear panel 1257, and afterwards secure it with the M3 nuts. Press the fixing caps 383 from above and below onto the muffler and slide the exhaust shield 372 over them.





B-57-2

Cab section ill.



Complete Kit MAN Completion of assembly groups

5 Cab section

5.1 Assembling the cab

Use screws 4 to screw the premounted front section onto the roof. Make sure that on both sides the roof sits absolutely close to the front section!

With screws 114 and nuts 109 attach the footboards 463 onto the fenders 605 and 606. Screw on the left fender 606 with screws 10 onto the left side panel 6115, and the right fender 606 onto the right side panel 603. Side panels with the fenders are now screwed on as follows: with screws 10 onto the roof, and with screws 2, washer 13 and square nuts 12 onto the front panel along those webs prepared. Now check again the position of the doors and re-adjust them if necessary.

Should you intend applying a decal it is advisable doing it right now.

5.2 Seat rear panel and battery plate

First pass the switch toggles at the switch panel through the holes provided in the seat rear panel 222; secure from the front using four knurled nuts 210 (see therefore illustration 12).

Accordingly to the illustration attach the switch sticker onto the seat rear panel; the letters indicating the switches do now stand on their heads. Please see ill. 13b for the assignment of the switches. Now slide one each square nut 12 into the slits of the four fixing gaps of the side panels. Then fix the seat rear panel from underneath onto the side panels using screws 2. Hang both seats 103 onto the seat rear panel.

Now start mounting the battery carrier plate 225. Turn a nut M3 onto the door handle 75 and tighten it. Then set on one washer 13 and one spring washer 14 and insert the handle through the hole provided for in the battery plate. From the rear slide the door lock 76 over it and screw on one square nut 12. Door handle and door lock should be fixed that way that they stay right-angled towards. It is advisable using pliers to hold the door lock while securing it with the nut M3. Finally set the battery plate into place: on the left side panel of the cab it has to catch the groove provided for, and on the right side panel insert it underneath that plate with the half-round sparing. By turning the handle the plate gets locked.

5.3 Assembling the bumper with the lighting

Press the blinker lenses 621 as well as the headlight lenses 624 -the funnel-formed side showing outwards- into the corresponding openings of the bumper 619. Press one each bulb 713 into the outer clips for the blinkers, and into the socket 459 for the head lights. Press the socket, together with the bulbs, from the rear into the recesses of the reflectors. Glue both reflector foils 631 into the reflectors 620 and screw then the reflectors onto the bumper using screws 397. With screws 57 and nuts M3 attach the bumper onto the front panel. Use caps 366 to cover the recesses in the bumper.

Differential

B-44-6

Speed controller

Complete Kit MAN Completion of assembly groups

Components attached to the front frame section ill. 7 6 Preview of the

176

The illustration at the left shows the locations of the PCBs and the routing of the ribbon cable beneath the frame. The cable will have to be installed underneath the frame before the electrical devices are installed in their entirety. The cable should run between the frame and the axles, the fifth-wheel shaft and the screws used to affix the tank. If the cable were to be laid later it would be necessary to disassemble some components already installed.

The best course of action is to read all the information on the electrical system in **Chapter 13** before you begin assembling the components on the frame. This will give you an idea of which components will be connected by cable.

7 Components attached to the front frame section

electrical system installation

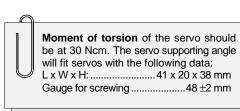
7.1 Fixing parts for the cab

Using each two nuts M3 to attach one screw 4, washer 13 and bushing 26 onto the lower front holes on both sides of the frame. At a later stage of assembly (after the completion of all assembly groups see **Chapter 12** - the front panel of the cab will be set hereon.

Once you have cut off the lateral cover on the locking device **476** (for this purpose use either pliers or scissors), tense both springs **176** between those spigots of the locking device therefore provided. Then press the locking device into the base **477** and fix the screw **115** into the bore on top of the locking device. Now hang in the spring **74** as follows: on top behind the screw head, and at the bottom on the nose of the base. Now add the base cab locking onto the frame **45** with screws **2** and nuts M3. After adding the cab to the frame the locking device catches the gaps of the rear panel and thereby holds of it.

7.2 Mounting the servo unit

Accordingly to the drawing, use screws **5**, washers **13** and nuts M3 to fix the bushings **28** onto the steering servo. Add now this complete unit onto the servo supporting angle and fix it with screws **2**. Use screws **2** and nuts M3 to attach the servo supporting angle underneath the frame.



7.3 Mounting the PCB support

Use two adhesive pads **655** to affix the PCB support **723** behind the servo supporting angle under the frame.

7.4 Assembling the blinker switch

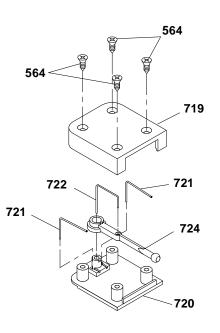
Slide two single-bent springs **721** into the corresponding holes and slots in the base plate **720**. Insert the double-bent spring **722** into the two holes on the lever blinker switch **724** and then place the eye of the lever over the boss on the base plate. The cover plate **719** is now secured to the base plate with countersunk screws **564**.

Attach the blinker switch with two adhesive pads **655** that way onto the steering servo, that the clamp-type connector **929** lays closely on the fore edge of the housing.

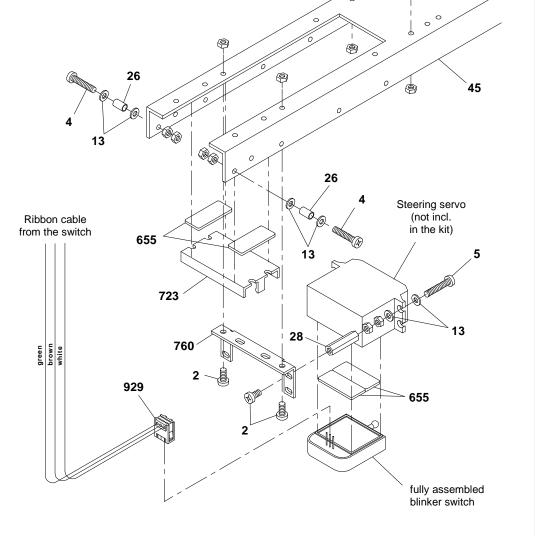
Assembly of blinker switch

Gear

Blinker switch



Qty.	No.	Assembly part	Qty.	No.	Assembly part			
12		Nut M3	4	564	Countersunk tapping			
6	2	Screw M3 x 8			screw 2.2 x 4.5			
2	4	Screw M3 x 16	4	655	Adhesive pad,			
2	5	Screw M3 x 20			double-sided			
8	13	Washer 3.2	1	719	Cover for blinker switch			
2	26	Bushing 4 x 0.5 x 7	1	720	Base for blinker switch			
2	28	Threaded bushing 20mm	2	721	Spring, single bent			
1	45	Frame 3-axle chassis,	1	722	Spring, double bent			
		432mm	1	723	PCB support, small			
1	74	Draw spring	1	724	Lever for blinker switch			
1	115	Screw M2 x 8	1	760	Servo angle 1, small			
2	176	Coil spring for lever	1	929	Clamp-type connector,			
1	476	Cab locking device			3-pole			
1	477	Base for locking device						

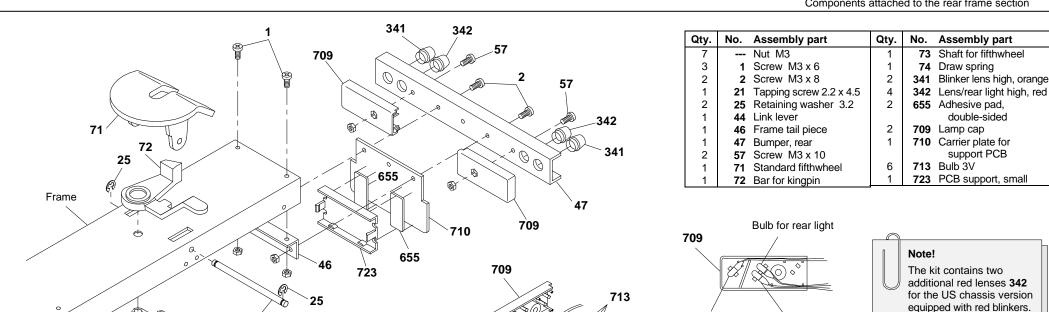


Cut off

this part

__ ___

B-44-7



Inserting the bulbs

Bulb for blinker

Bulb for

brake light

Front axle section

B-44-9

Frame No. Assembly part Qty. No. Assembly part --- Nut M3 32 Spring long, "AF" 2 33 Spring medium, "AF" 2 Screw M3 x 8 3 Screw M3 x 12 2 34 Spring short, "AF" 4 Screw M3 x 16 36 Steering rod M2 x 50 2 2 5 Screw M3 x 20 41 Half-axle guard 12 13 Washer 3.2 42 Steering lever 2 32 18 Hex head screw 52 Rim, chromed M4 x 25 53 Standard tyre **19** Nut M4 2 "Ecocontrol" **20** Washer 4.3 55 Front axle **26** Bushing 4 x 0.5 x 7 **109** Nut M2 27 Axle tube 789 Fork head 2 29 Ball bolt M3 2 908 Stop nut M3 30 Ball socket 1390 Track rod, flat 32-For a better overview the illustration is showing an assembly without the parts attached to the front frame section 1390 **52** 908 30 109 789 B-44-9

Complete Kit MAN Completion of assembly groups

8 Components attached to the rear frame section

8.1 Mounting the fifth-wheel components

Attach the spring 74 to the link lever 44 with a screw 1 and M3 nut. Insert the bar 72 into the opening from above, securing it from below with the link lever and a tapping screw 21. Mount the fifth-wheel 71 from above, inserting the feet into the slots in the frame. Slide the shaft 73 through the holes at the side of the frame and the feet of the fifth-wheel, catching the free end of the spring 74 between the feet when doing so. The shaft is secured with two retaining washers 25.

Please ensure when attaching the fifth-wheel that the ribbon cable with the two circuit boards is located between the frame and the shaft (ill. 6).

8.2 Mounting the rear bumper assembly

First insert the bulbs 713 in the lamp caps 709 as shown in the figure. Now affix the assembled caps to the rear bumper 47 using one each screw 57 and M3 nut. From the rear insert the lenses into the bumper: outwards the blinker lenses 341, inwards the rear light lenses 342. Attach the frame tail piece 46 underneath the frame using screws 1 and M3 nuts. Then the bumper and carrier plate **710** are set in front of the frame tail piece and attached with screws 2 and M3 nuts.

Take particular care that the bulb cables are not clamped between the bumper and the frame tail piece; this could cause a short cir-

Using two adhesive pads 655, affix the PCB support 723 on the front surface of the carrier plate, centred and flush with the bottom edge.

9 Front axle section

9.1 Mounting the suspension with front axle

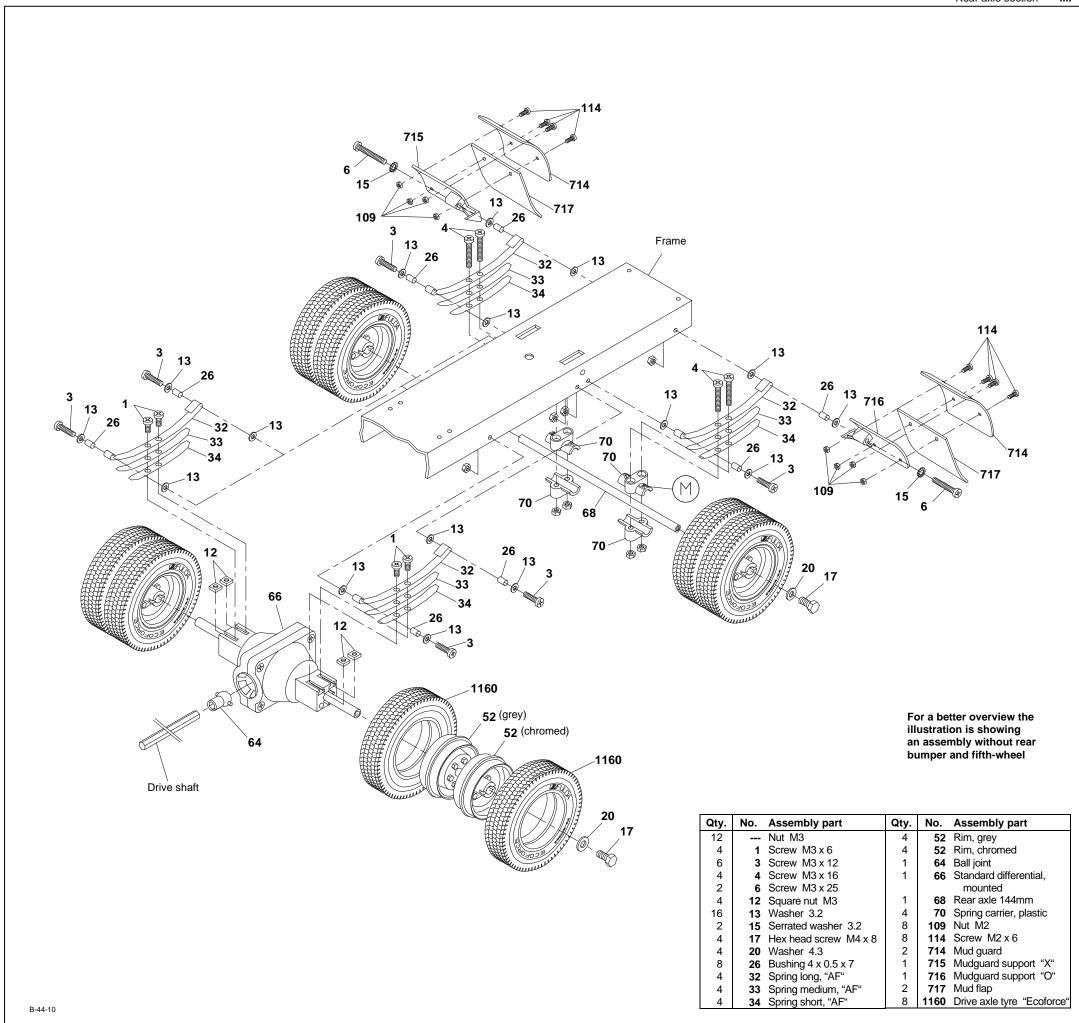
First install the screws 3 together with washers 13, bushings 26, and M3 nuts at the rearward holes in the frame, provided for attaching the springs. Then attach the open ends of the two long spring leaves 32 at the bushings and use an identical set of parts to screw the closed ends to the front of the frame 45. One nut 19 each is pressed into the hexagonal depressions at the steering lever 42. Use two screws 5 and M3 nuts to attach to the long spring leafs, previously mounted, two medium spring leaves 33 and a short spring leaf 34 along with two half-axle guards 41, into which the front axle 55 and steering lever 42 have been inserted. Before tightening down the screws 5 ensure that the spring sets are not under tension and can move

11.2 Mounting the wheels and steering linkage

First mount the standard tyres 53 on the rims 52. Then use screws 18 and one washer 20 each in front of and behind the axle tube 27 located in the hub to bolt the wheels to the steering lever, using the nut already inserted. To the outer holes on the steering levers fix two screws 4 along with nuts M3. To this unit add now the track rod 1390 using washers 13 and stop nuts 908; do not tighten the stop nuts but leave the track rod moveable.

With screws 2 fix two ball bolts 29 to the inner holes on the steering levers for the attachment of the steering rods. To a steering rod 36 add one nut 109, fork head 789 and ball socket 30. The steering rod has to be bent slightly, depending on the size of the servo unit. Afterwards clip this steering rod for the servo linking to the left-hand ball bolt. For operation of the blinker switch, add to the right-hand ball bolt another steering rod 36, equipped with two ball sockets 30. Adjust the distance between the ball sockets so that the wheels are in the straight-ahead position when the lever of the blinker switch is in its neutral setting.

Rear axle section ill.



Complete Kit MAN Completion of assembly groups

10 Rear axle section

10.1 Mounting the mud guards

The mud guard support **715** is marked with an "X" and will later be mounted on the passenger's side, the mud guard support **716** marked "O" on the driver's side. First attach to these supports the mud flaps **717** and the mud guards **714** with four screws **114** and nuts **109** each. Then use screws 6, serrated washers **15**, bushings **26**, two washers **13** and M3 nuts to attach the supports to the holes at the rear of the frame.

10.2 Mounting the spring set and axle

Attach the open ends of the two long spring leaves 32 to the bushing and use a screw 3, bushing 26, washer 13 and M3 nut to screw the closed end to the frame. Press one each M3 nut into the hexagonal recess at the lower spring carrier 70. The axle 68 can now be mounted together with the spring carriers, one medium spring leaf 33 each, a short spring leaf 34 and screws 4.

- Ensure that the end of the spring carrier 70 identified with an "M" is toward the wheel.
- The ribbon cable with the two lamp PCBs should be mounted when attaching the rear axle and the differential!

10.3 Mounting the spring set and differential

First attach the long spring leaves 32 to the frame. Once you have inserted one square nut 12 each into the grooves at the side of the differential the springs can be attached with screws 1. The differential has two cams on the wheel mounts; the grooves in the hubs are aligned exactly with these cams. The wheels are affixed using screws 17 (which will cut their own threads) and washers 20. Press the joint ball 64 into the joint socket at the mounted differential.

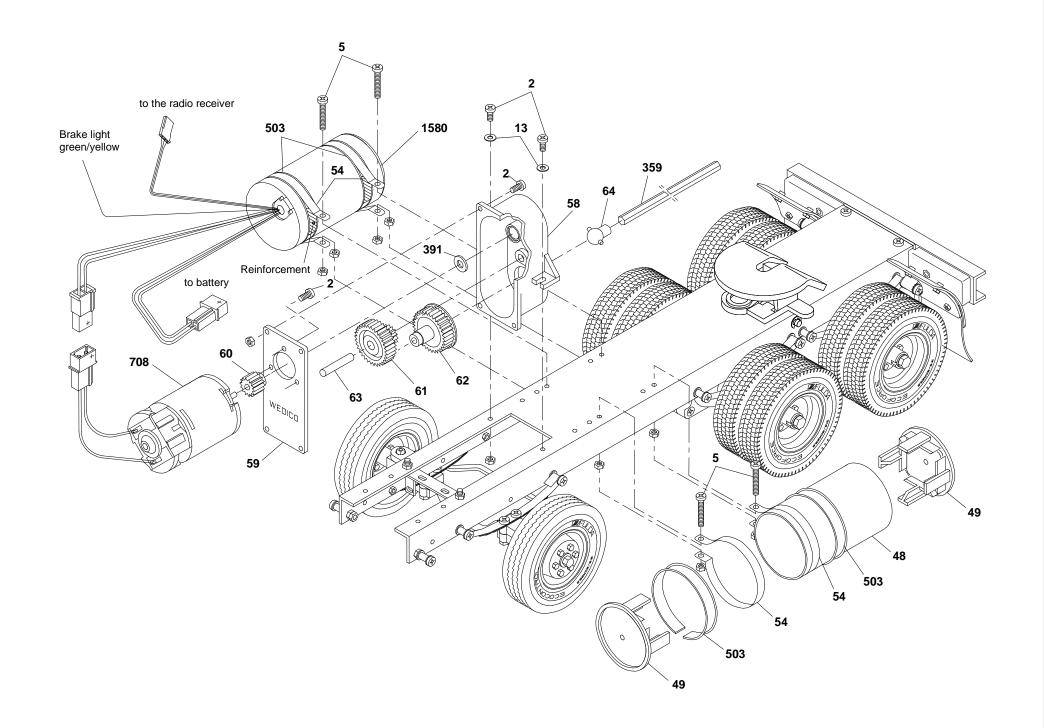
In no case should you use an M3 screw more than 6 mm long to affix the spring set as this would cause binding and damage the shafts on the differential!

10.4 Mounting the wheels

<u>Note</u>: Sometimes it happens that the chromed rims sit too tightly on the axle (work tolerance); in this case remove a bit the chrome inside the rims, and lightly grease the running surface (e.g. using Vaseline).

Once you have mounted the drive axle tyres **1160** on the rims **52** the wheels are mounted on the shaft, with the wheel nuts facing one another and the chromed rims toward the outside; secure with a washer **20** and a screw **17**. The wheels should turn easily but there should not be too much play.

Qty.	No.	Assembly part	Qty.	No.	Assembly part
14		Nut M3	1	61	Double pinion
9	2	Screw M3 x 8	1	62	Gear wheel with joint
4	5	Screw M3 x 20			socket
2	13	Washer 3.2	1	63	Shaft for gear 116
1	48	Tank tube, polished	1	64	Ball joint
2	49	Tank cap, flat	1	359	Drive shaft 145mm
4	54	Clamp fitting, standard	1	391	Shim 5 x 10 x 1
		frame	4	503	Insulating strip
1	58	Case for gear 116	1	708	Bühler motor incl.
1	59	Cap for gear 116			14 teeth pinion
(1)	60	Motor pinion white,	1	1580	Speed controller,
` ′		14teeth			round tank short



B-44-11



11 Drive section

11.1 Mounting the motor and gearbox

Use screws 2 to bolt the gear cover 59 to the motor 708 (we supply the white motor pinion 60 (14t.) already mounted to the motor shaft). Before assembling the gearing lubricate the gears and shafts lightly with Vaseline. Then clip the joint ball 64 in the gear wheel 62. Lay this gear wheel, the double pinion 61 with shaft 63 and -not to forget!- the shim 391 in the gear housing 58 and use screws 2 and M3 nuts to secure the gear housing to the cover. Once assembled, this unit is inserted from above into the opening in the frame and secured at the sides with screws 2, washers 13 and M3 nuts. At the same time the drive shaft 359 is inserted at the joint balls between the gearbox and the differential.

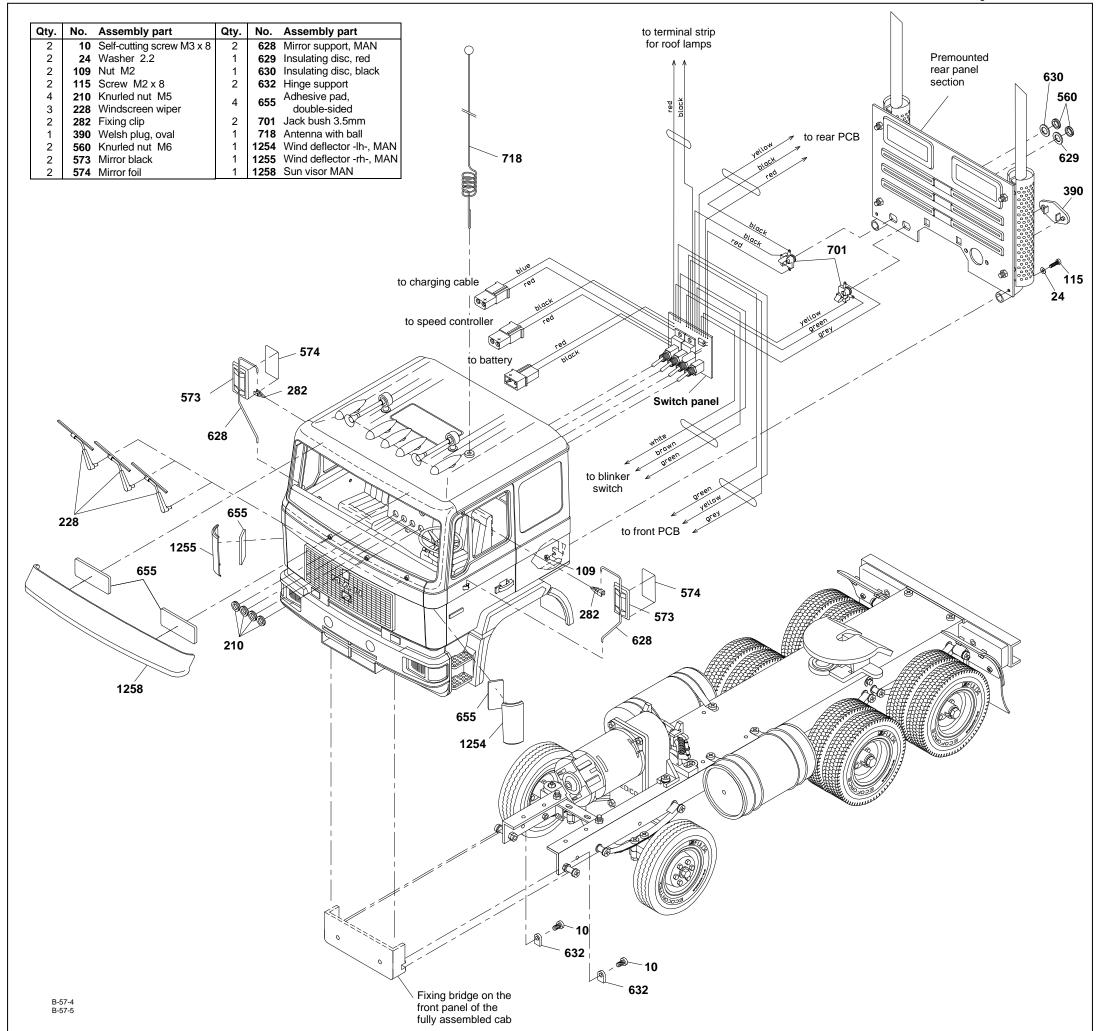
11.2 Mounting the tank and speed controller

When affixing the tank please ensure that the ribbon cable with the two lamp PCBs are located between the frame and the screws used to affix the tank (ill. 6).

Press the tank cap **49** into the tank tube **48**. Now attach the tank and the speed controller **1580** to the frame. The insulation strips **503** must be wrapped around these two components in such a way that the reinforcement, about 20 mm long, is located between the tank tube and the frame and that no contact with other components is possible. First use a screw **5** and an M3 nut to attach the straight ends of the clamp fittings **54** to the top of the frame. Now pass the other end around the tank or speed controller, clamping the insulating strips in between, and slide the free end from below the frame onto the threads of the screw **5**. Now the tank and the speed controller are in contact with the frame. The cable exit at the speed controller should point to the front and toward the frame. The clamp fittings are secured from below with M3 nuts.

NOTE: Instead of the tank, to the left frame side you perfectly may add an Electronic Original Diesel Engine Sound, Art.-No. 189.

Assembling all sections ill.





12 Assembling all sections

12.1 Attaching the jacks into the rear panel

The jacks **701** attached to the switch panel are clipped into the matching slots in the cab rear panel. The insulating discs, red **629** and black **630**, are attached from the outside and secured with the knurled nuts **560**. The black insulating disc serves to identify the jack with the two black conductors.

When installing the rear panel make sure that the solder lugs of the jacks do not touch!

The oval plug **390** is clipped in the unused holes in the cab rear panel.

12.2 Attachment of the cab onto the frame

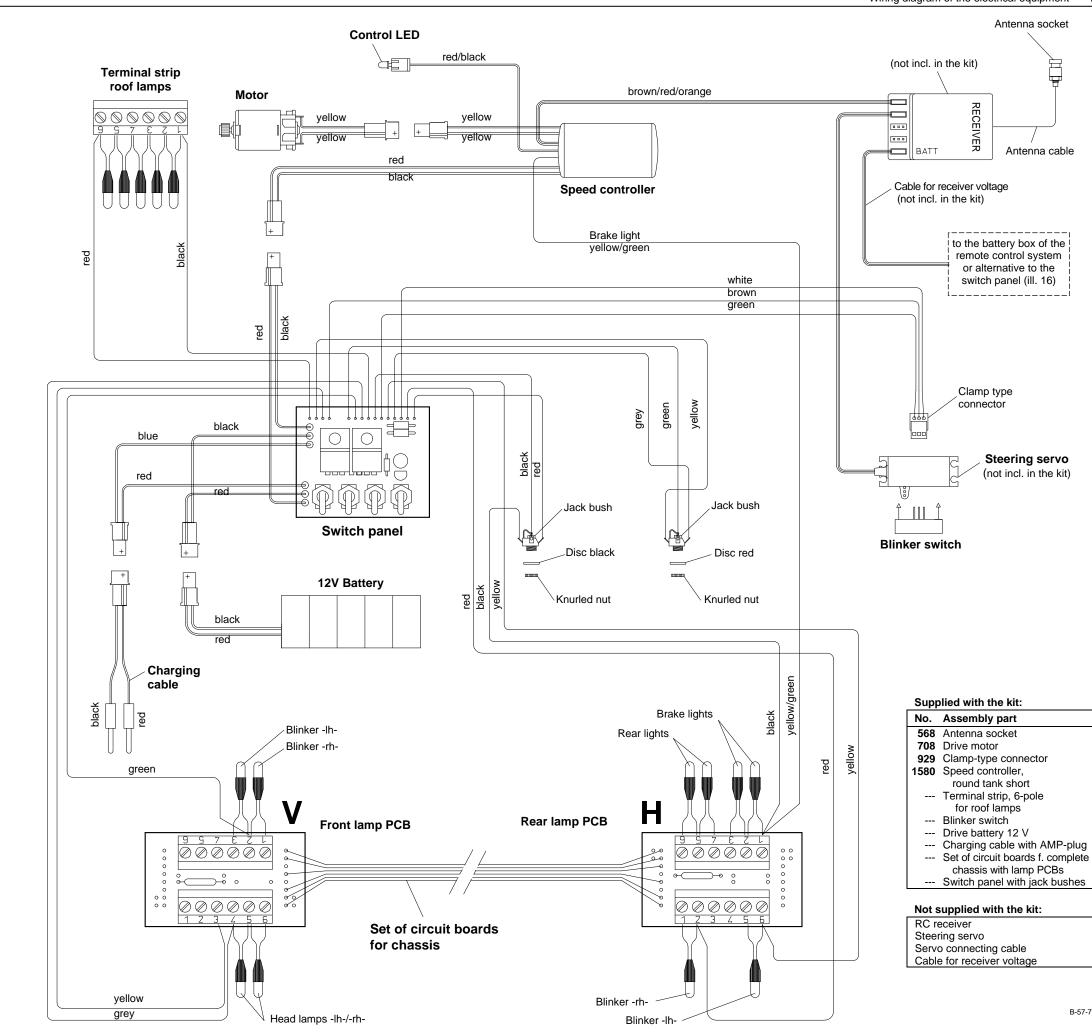
Attach the cab by fixing the front panel onto the frame. Open slots at the bottom of the front panel serve for this purpose: Slide them onto those bushings screwed onto the front frame, and then fix them with two hinge supports 632 and with self-cutting screws 10. Thereby the cab remains tiltable frontwards. After having slid the rear panel into the guide grooves of both side panels, use now screws 115, washers 24 and nuts 109 to attach the cab rear panel onto the frame. The noses of the rear locking device you mounted already onto the frame will now catch the sparings of the rear panel whereby they are fixing them. too.

12.3 Attaching the small exterior components

Press the three windscreen wipers 228 into the holes at the front panel. The sun visor 1258 is attached above the windshield with two adhesive pads 655. Insert the antenna 718 into the antenna socket after sliding the ball onto the tip of the antenna.

For the easier identification, both wind deflectors 1254 and 1255 are marked by different letters: "L" (left-hand side), and "R" (right-hand side); attach them to the cab's front using one each adhesive pad 655

Finally add the side mirrors. Stick the reflector foil **574** onto the mirrors **573** and press them onto the mirror supports **628**. After the clips **282** has been pressed into the upper bore of the door, hang on the complete mirror unit.





13 The electrical system

The wiring diagram shows the cable connections for the individual electrical components.

13.1 Mounting the switching panel and lamp PCBs

The switch panel is inserted into the seat rear panel of the cab. First connect the bulbs and cables and then clip the lamp PCBs in place at the front and rear in the supports provided for this purpose.

13.2 Information on the bulbs, troubleshooting

All the bulbs are 3-volt bulbs connected in series. This means that the conductors are not each connected to the supply voltage, as in an automobile. Instead, the ends are joined one to another to form a chain and the ends of the chain are attached to the power supply. Consequently just a single defective bulb will interrupt the entire circuit and none of the lamps in the chain will light. The best way to locate the defective bulb is to use a cable to bypass each of the bulbs in the series, one after the other. When you bypass the defective bulb, the rest in the chain will light. The reason for using a series circuit, which may appear to be complicated, is the low power consumption. 3-volt bulbs use far less power than 12-volt bulbs in relation to their brightness. The power consumed by a chain of up to five 3-volt bulbs is just 0.1 A in the series connection which we use; 12-volt bulbs, by comparison, would draw 0.3 A.

13.3 Wiring the roof lamps

The bulb leads and the red and black cables from the switch panel are attached at the screw terminal strip for the roof lamps. Then attach the terminal strip under the roof as described in Section 3.2.

Be careful when clipping off the solder pins at the terminal strip as there is a danger of shorts!

13.4 Wiring at the rear lamp PCB (tail and brake lights, rear blinkers)

The red/black/yellow cable exiting the switch panel for the rear lamps are routed under the frame and to the rear and connected to the PCB - marked on the bottom with "H" for rear - as shown in the illustration. The green/yellow brake light cable coming from the speed controller is also to be connected at this PCB. Once the bulb leads have been attached, the PCB is clipped in place at the support which was previously affixed with adhesive pads.

Explanation: The green/yellow brake light cable connects the brake light bulbs to ground when the vehicle is at a standstill. This circuitry incorporates an element which limits the current to 750 mA and will disable the circuit in case of an overload or short. Switching off the supply voltage for about one second will reset this element, provided that the reason for the malfunction has been corrected.

13.5 Wiring at the front lamp PCB (headlamps, front blinkers)

The green/yellow/grey cable serving the lamps at the front also exits from the switch panel and is routed below the frame and to the front in exactly the same fashion. After connecting to the PCB - marked on the bottom with "V" for front - and connecting the bulb leads, the lamp PCB is clipped in place in the support previously mounted.

13.6 Wiring the blinker switch

The green/brown/white cable for the blinker switch terminates in a clamp-type connector (see therefore ill. 13a on page 11). This connector is attached to the blinker switch (if the direction of travel does not correspond to the blinking, please rotate it through 180°), mounted beneath the steering servo, already illustrated in ill. 7.

13.7 Connecting the speed controller

Connect the AMP socket with the yellow cables to the corresponding AMP plug at the drive motor, and the AMP plug with the red/black cables to the AMP socket at the switch panel.

The connection of the green/yellow brake light cable has already been described in Section 13.4. The signal "brake light" is switched by minus line, and it is time-triggered: As soon as one changes the position of the control lever from either "forward" or from "reverse" to the neutral position (switched-off), the brake light starts lighting for approx. eight seconds. But as soon as the travelling operation is started again, the brake light stops automatically its blinking, even before having finished these eight seconds.

Attach the connecting socket with the brown/red/orange cable to one of the receiver terminals. If the socket doesn't match the receiver, you will need to add an adapter cable (not making part of this kit).

13.8 Starting the electrical system (see switches, ill.13b)

The electrical system is put into operation by turning on the main switch; the LED blinks. Then the transmitter and receiver are switched on, in this order. (Always switch off the receiver first and then the transmitter!) If a speed controller has been installed, the brake lights will go on. If the light switch is on, the headlamps, the roof lamps and the tail lamps will light.

14 The speed controller

The WEDICO speed controller is matched to the WEDICO-Bühler motor. The electronics are permanently installed in a tank housing, which should never be opened! Never apply force as this could damage the speed controller and nullify any and all guarantee entitlements. Prior to its supply, each speed controller is individually tested and provided with a basic programming. In your particular case, probably this general basic programming may not be the optimal for the type of RC equipment you are using, but you of course may change it (for further details please refer to the section 14.2 "programming").

14.1 Starting the speed controller

1. Put in the servo connecting cable in

the matching colour

sequence, the wire ends

protruding about 10 mm.

Switch the electrics on by the following sequence: start by the main switch of the Electr. System, then switch on the transmitter, and finally the receiver; keep your eye on the control LED. Before you make the motor starts working remote-controlled, it is the speed controller which has first to detect the programmed neutral position; this position sits approx. in the centre on the control lever of your transmitter unit. Once the speed controller has correctly detected said position, as a confirmation the control LED starts blinking for a ten times term. Only then one may consider the speed controller as in state of readiness; and now the motor power can be controlled for both senses of direction via the control lever.

14.2 How to programme the speed controller

Continue paying your attention to the control LED. For the correct adjustment of the control lever on the transmitter, set the shift controller in neutral position; slide then the control lever into that position at which you wish the motor to be "off". As a confirmation, lightly press the programming key "4" on the speed controller (refer to next paragraph). Do not move the control lever on the transmitter. Now, the speed controller detects the neutral position, and the control LED starts its ten times blinking.

Immediately after the blinking activity has started, slide the control lever into the position for maximum "forward" speed; secure the lever at this point. Do not move it. Even after the 10th blinking, the control LED remains dark. As soon as the transmitter of your RC equipment has detected the pulse corresponding to the maximum speed, the control LED starts blinking again for a ten times term.

Immediately after the start of this blinking activity move the control lever from the position "forward" directly to the position provided for maximum "reverse" speed; secure the lever at this position. Again, after the 10th blinking the control LED remains dark. Once the transmitter of the RC unit has detected that pulse responsible for the maximum speed, the control LED starts blinking again.

This signifies that the programming procedure of the speed controller has been completed. The transmitter of the RC unit has successfully detected the pulse coming from the speed controller, and now the complete system is ready to operate.

If an error has been made during the programming procedure, the system will not accept the new figures. In this case switch your Electrical System off just for a short moment, and then switch it on again; this procedure will re-activate the previous version of the programming you have chosen for your speed controller. At this stage you may start again any new programming.

14.3 Options for adjusting the speed controller

The holes at the rear tank cover are identified by numbers and serve for the following types of adjustments, as there are:

- to "3": By a potentiometer, adjustment of the maximum motor speed from 50 to 100% for the 1st direction (either forward or reverse, see below)
- to "4": By key initiating the programming procedure,
- to "5": By potentiometer, adjustment of the maximum motor speed from 50 to 100% for the 2nd direction (either forward or reverse, see

It is by testing only that you find out which of both holes, either "3" or "5", is responsible for the maximum motor speed of the direction "forward" resp. the direction "REVERSE".

Standard values on the speed controller are adjusted by manufacturers. For any alteration of adjustment use a small screwdriver. Be careful and don't apply any force!

14.4 Troubleshooting

No blinking activity on the speed controller after having put into operation	The position of the shifting lever provided for the adjustments does not correspond to the position of the programming procedure. Make sure the shifting lever has been set to neutral position!
Motor does not react at all	Inadequate wire connections; receiver voltage below 3 V; main NiCads too low (below 8 V)

15 Charging the drive battery

For charging the drive battery connect as follows:

- the AMP-plug of the charging cable to that AMP-socket with the blue/red cable of the cab's switch panel,
- the banana plugs of the charging cable to a charging unit.
- Warning: Ensure that the banana plugs for the charging cable do not touch while the charging cable is connected to the switch panel.

At normal discharge levels it will take about 12 to 14 hours to recharge the battery (at 150 mA). Quick charging should be used only in exceptional cases at a maximum of 1.5 A for one hour.

16 The remote control system

To operate the speed controller and the steering servo an inexpensive 2/4 channel system will be sufficient. Should you intend installing additional electrical accessories, such as e.g. Diesel Engine Sound, Art.-No. 189, for an RC equipment we would recommend a 2/4 channel unit, offering the installation of retrofit sets for the operation of switching functions. Please ask your dealer for advice. Follow the instructions provided by the RC system manufacturer when installing the receiver unit.

Should you don't wish the receiver voltage of your radio unit being supplied via an independent battery, you may connect it to your 12V truck battery. For this purpose you have to solder the wires of the receiver battery onto the switch panel (see ill. 16).

Note: By the installed voltage regulator (as a series fitting) the battery voltage of 12V on the switch panel is now automatically being reduced to 5 volts.

Attention: This special electrical equipment making part of our production line "Complete Kits" will not fit any other electrical accessory

offered within the range of WEDICO System-Kits.

Complete Kit MAN

Completion of assembly groups

Should you once wish to extend your "Complete Kit" by one or the other electric accessory you will have to exchange this electrical system. WEDICO offers you the following Electrical Systems:

- Art.-No. 783: The information to the semi-trailer is transmitted via a multi-frequency system. When adding an Infrared System (Art.-Nr. 790 as transmitter, and Art.-No. 791 as receiver), you may drive your prime mover with any of a semi-trailer it does not depend on the type of Electrical System your truck is equipped with.
- Art.-No. 796: The information is serially transmitted via one data line only inside the prime mover. The information to the semi-trailer is transmitted via an Infrared Diode (transmitter).

Except these electrical components, all other accessories (for standard chassis) being offered within our programme WEDICO System-Kits will fit your truck and/or semi-trailer and may be installed.

At electrical connections, please make sure that soldering points are clean and plug connectors are properly cramped!

Loose plugs and loosely twisted wire connections cause faults which are often hardly to locate.

17 Supplementary information

clamp-type connector
using a pair of pliers or
better, a small vice, until
the locks at the sides
snick audibly into place.

3. Cut off the

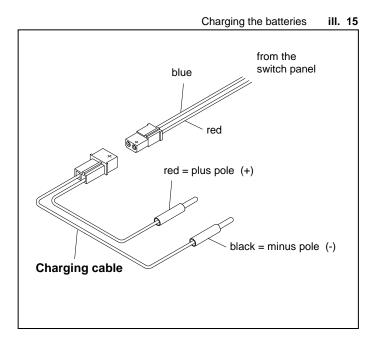
wire ends and

insulate wires.

Attachment of the clamp-type connector

2. Carefully squeeze the

ill. 13a



Switch panel

Plug for the connection to receiver battery

(+) red (5V)

(-) black

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ill.

Solder points for the connection of 5V receiver voltage

Complete Kit MAN Completion of assembly groups

Complete list of parts necessary for the assembly (please use EDP-number when ordering spare parts)

Qty.		Assembly part	EDP-No.	Qty.		Assembly part		Qty.		Assembly part	EDP-No.	Qty.	No.	Assembly part	EDP-No.
65		Nut M3		1	62	Gear wheel with joint socket	20326	1		Antenna socket, complete		11	655	Adhesive pad, double-sided	20410
6	1	Screw M3 x 6	20016	1		Shaft 5 x 24 for gear 116		2	573	Mirror black	20398	2	701		
27		Screw M3 x 8		2		Ball joint		2		Mirror foil	20366	5		Roof lamp, chromed	
10	3	Screw M3 x 12	20022	1		Standard differential, mounted		1	600	Front panel MAN:		2		Horn	20350
13		Screw M3 x 16		1	68	Rear axle 144mm	20126			white	25634	1	708	Bühler motor including	
10		Screw M3 x 20		4	70	Spring carrier, plastic	20138			red				14 teeth pinion	
2		Screw M3 x 25		1	71	Standard fifthwheel	20008			black	25640	2	709		
12		Self-cutting screw M3 x 6		1		Bar for kingpin		1	602	Side panel -lh-, MAN:		1		Carrier plate for support PCB	
15	12	Square nut M3	20044	1	73	Shaft for fifthwheel	20012			white	25658	15	713	Bulb 3V	20310
49	13	Washer 3.2	20046	2	74	Draw spring	20462			red	25662	2	714	Mud guard	
1	14	Spring washer 3.2	20056	1	75	Door handle	20084			black	25664	1	715		
8				1		Door lock		1	603	Side panel -rh-, MAN:		1		Mudguard support "O""	
4				2	93	Muffler 80mm	20074			white	25650	2	717		
4		Hex head screw M4 x 8		2	95	Exhaust tail pipe	20078			rot	25654	1	718		
2	18	Hex head screw M4 x 25	20038	4	96	Exhaust cap	20079			black		1	719		24920
7	19	Nut M4	20042	2	103	Seat	20080	1		Fender -lh-, MAN		1	720		
8	20	Washer 4.3	20048	15		Nut M2		1	606	Fender -rh-, MAN	25418	2	721	Spring, single bent	25066
1	21	Tapping screw 2.2 x 4.5		6		Self-cutting screw M3 x 8		1	607	Door -lh-, MAN:		1	722	Spring, double bent	25068
2	24	Washer 2.2	21210	12	114	Screw M2 x 6	21268			white	25692	2	723		
2	25	Retaining washer 3.2	20058	5		Screw M2 x 8				red	25696	1	724	Lever for blinker switch	24918
20	26	Bushing 4 x 0.5 x 7	20088	2	176	Coil spring for lever	20260			black	25698	1	760	Servo angle 1, small	26122
2	27	Axle tube	20150	4	210	Knurled nut M5	20440	1	608	Door -rh-, MAN:		1	789	Fork head	20400
2	28	Threaded bushing 20mm	20070	1	222	Seat rear panel	21962			white	25684	2	908	Stop nut M3	30568
2	29	Ball bolt M3	20170	1		Battery carrier plate				red	25688	1	929	Clamp-type connector, 3-pole	21772
3		Ball socket		2	228	Windscreen wiper -lh	21972			black		8		Drive axle tyre "Ecoforce"	
6	32	Spring long, "AF"	20132	2	228	Windscreen wiper -rh	21974	2	609	Door inner cover, MAN	25440	1		Wind deflector -lh-, MAN	
8				2	282	Fixing clip	20360	2	610	Door lock, MAN	25434	1	1255	Wind deflector -rh-, MAN	25420
6		Spring short, "AF"		5	289	Lens for roof lamp, orange	20404	2	611	Door handle, MAN	25444	1	1256	Roof, Complete Kit MAN "C":	
2	36	Threaded rod M2 x 50	20268	2	341	Blinker lens high, orange	20304	4	612	Hinge bushing, door				white	28586
4	41	Half-axle guard	20144	4		Lens/rear light high, red		2	613	Door shield, MAN	25448			red	28598
2	42	Steering lever	20146	1	359	Drive shaft 145mm	20716	2	614	Door lock bushing	25446			black	28600
1	44	Link lever	20148	2	366	Lens flat, black	23864	4		Door hinge, MAN		1	1257	Rear panel, Compl. Kit MAN "C"	' :
1	45	Frame 3-axle chassis, 432mm	20254	2		Exhaust shield, chromed		2		Pin for door hinge Ø1.5 x 43.5				white	28584
1	46	Frame tail piece	20002	4	383	Fixing cap for exhaust shield	20426	1	617	Radiator grille, MAN	25414			red	28594
1	47	Bumper, rear	20006	1	390	Welsh plug, oval	20292	1	618	Frame radiator grille	25413			black	28596
1	48	Tank tube, polished	20120	1	391	Shim 5 x 10 x 1	23346	1	619	Bumper MAN	25392	1	1258	Sun visor MAN	25732
2	49	Tank cap, flat	20122	8	397	Tapping screw 2.2 x 6.5	23690	2	620	Reflector MAN	25404	1	1390	Track rod, flat	29312
4	52	Rim, grey	20128	2	459	Rubber funnel for reflector	24518	2	621	Blinker lens MAN	25432	1	1580	Speed controller, round tank show	rt 29764
6	52	Rim, chromed	20420	4		Access, fender Volvo/MAN		1	622	Dashboard MAN	25430	1		Sticker for switch	
2	53	Standard tyre "Ecocontrol"	28840	2	470	Mirror hinge, bottom	24292	1		Windscreen MAN		1		Drive battery 12V	21441
4	54	Clamp fitting, standard frame	20124	1		Locking device		2		Headlight lens, MAN		1		Terminal strip, 6-pole	21878
1		Front axle		1	477	Base for locking device	24300	2	628	Mirror support, MAN	25426	1		Charging cable with AMP-plug	25946
1	56	Steering wheel		2	483	Exhaust manifold	21202	1	629	Insulating disc, red	26230	1		Switch panel with jack bushes	26068
4	57	Screw M3 x 10	20020	1	498	Switch dashboard	24714	1	630	Insulating disc, black		4		Set of circuit boards	
1				4	503	Insulating strip	20296	2		Reflector foil MAN		'		for complete chassis	26072
1		Cap for gear 116		2		Knurled nut M6		6		Hinge support		1		Decal	
(1)		Motor pinion, white, 14teeth		4	564	Countersunk		2		Bushing 27mm (to be cut off the					
1 ì i		Double pinion for gear 116		4		tapping screw 2.2 x 4.5	25072	_		plastic tube 70mm)					

18 General parts list

For gaining an easier overview of all single components and their necessary quantity for the correct assembly of this model, on the left side of this page you find a complete list including each single item. For reasons of packaging some of the small parts are packed in a higher number of pieces than necessary. On the left side you find the quantity mentioned for each part. Next to this column you find the numbers of the assembly parts and their terms, followed by the EDP-numbers to be used when re-ordering one or the other item.