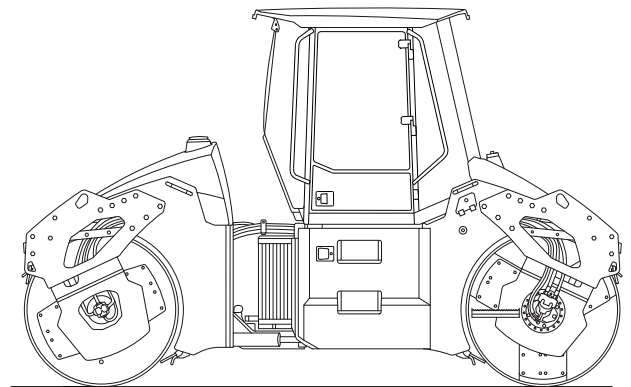


## Workshop manual

### **ARX 90** Deutz



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**SYMBOLS OF THE SAFETY NOTICES:**



The notice warns of a serious risk of personal injury or other personal hazards.



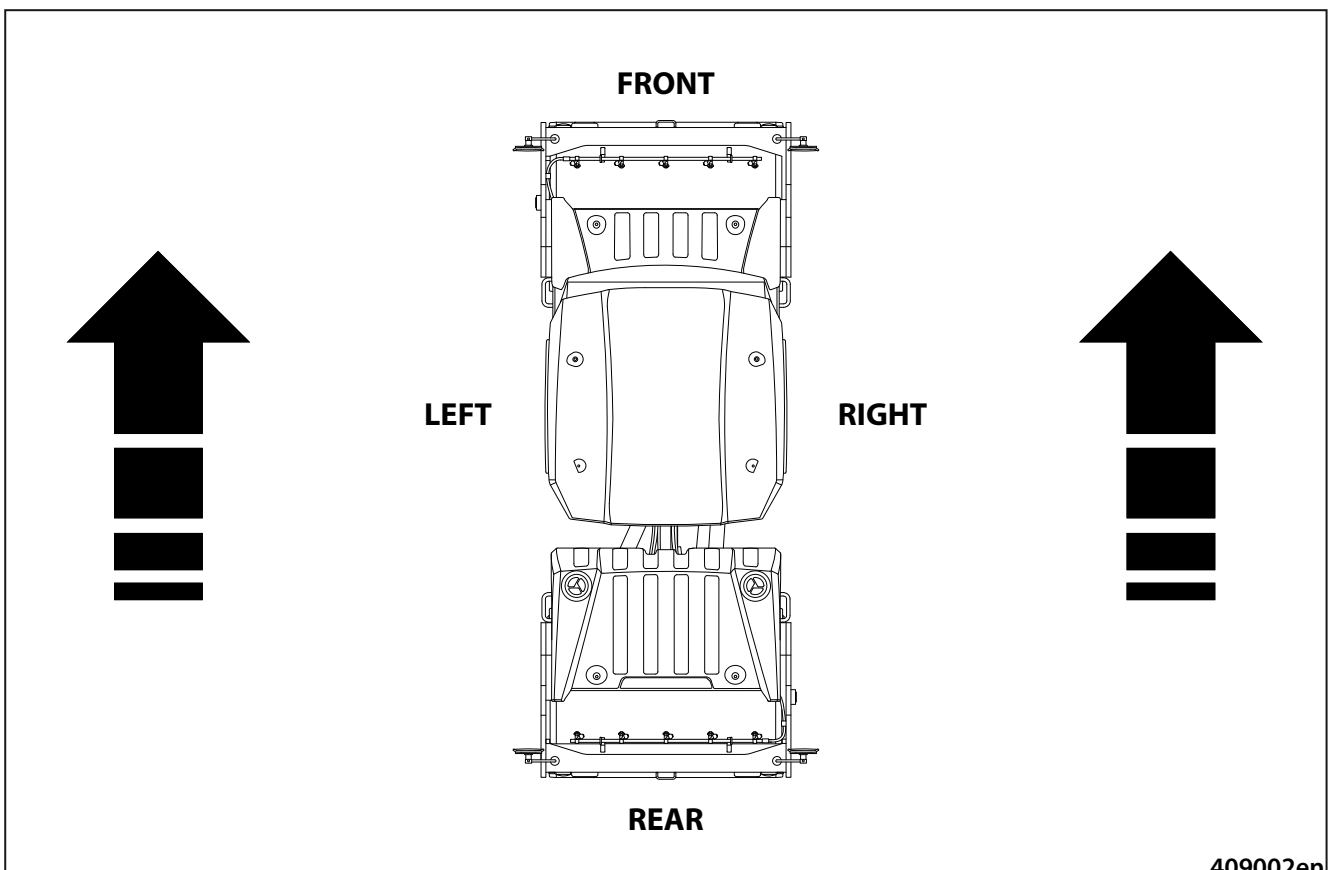
The notice warns of possible damages to the machine or its parts.



The notice warns of the necessity of environmental protection.

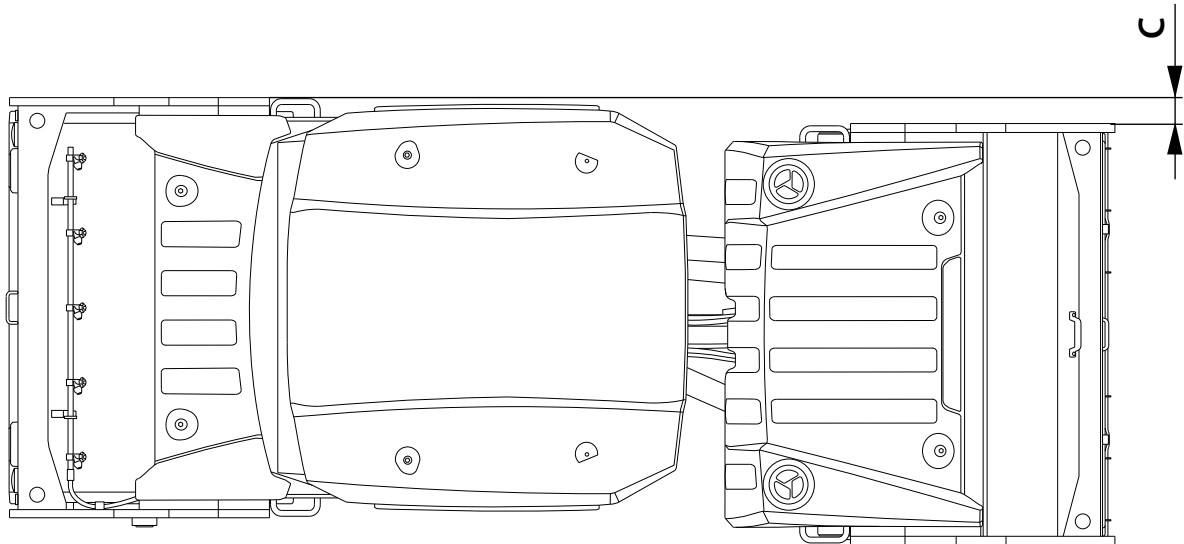
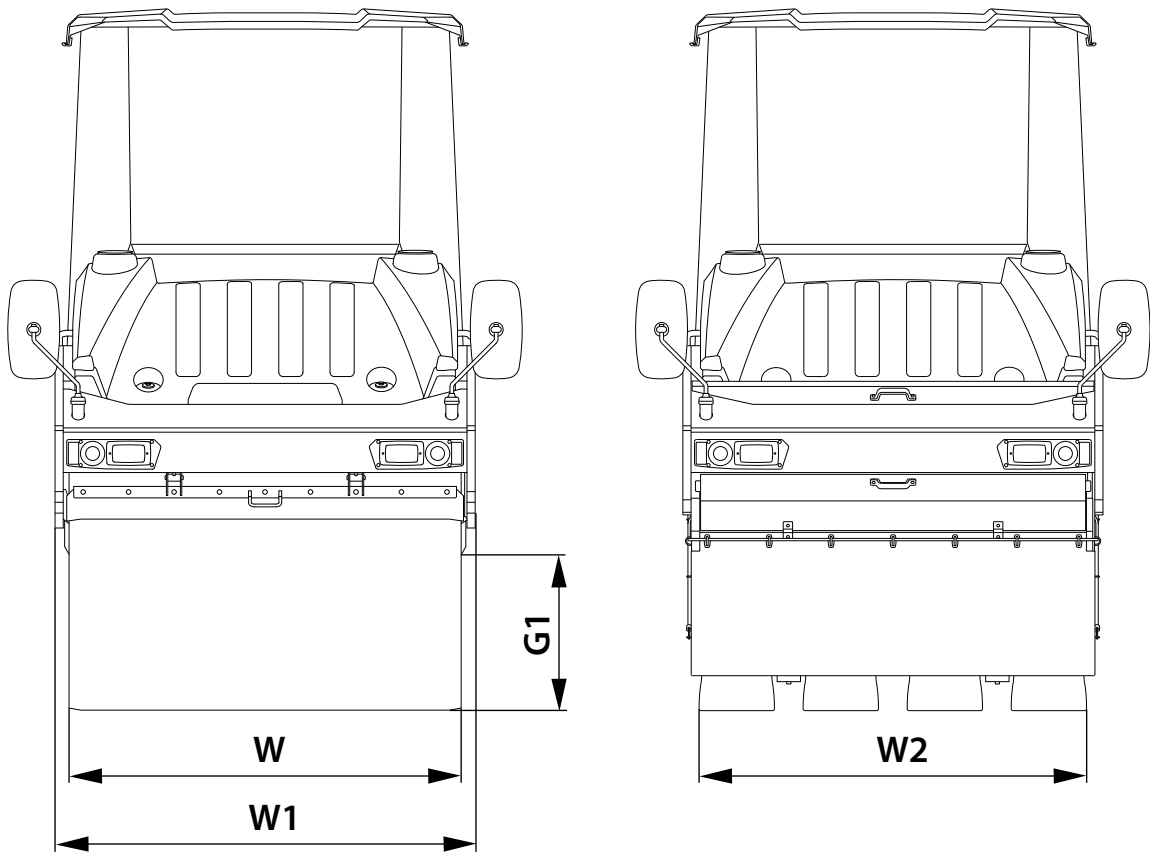
**! CAUTION !**

This Manual uses the terms like RH, LH, in the front, in the rear. These indicate the sides of the Machine viewed during forward drive.



409002en

## 3. Machine Description



409200

**5.6. Lube grease**



Use plastic lubricant with lithium content to lubricate the Machine under the following standards:

- ISO 6743/9 CCEB 2
- DIN 51 502 KP2K-30

**5.7. Glass washer fluid**



Use water (up to 0 °C temperature) and agent for motor vehicle glass washers when filling the glass washer tank.



**Replace water with antifreeze agent at the temperatures below 0 °C (32 °F).**

**5.8. Drum cooling liquid**



**Mixture:**

- 23 l (6,1 Gal US) of water
- 51 kg (112 lb) of calcium chloride - CaCl<sub>2</sub>

**5.9. Air Conditioning filling**



**Mixture:**

- 1,2 kg (2,65 lb) coolant Halocarbon 134a
- 0,3 l (0,08 gal US) oil PAG 150
- 0,005 l (0,0013 gal US) contrast medium

**5.10. Vibratory oil**



For lubrication of vibrator use oil by:  
SAE 40, API SC/CB

**5.11. Emulsion**



For sprinkling the tyres, use the anti-adhesive emulsion of the agent RHODOSIL EMULSION E1P with water in the mixing ratio 1.5:100.

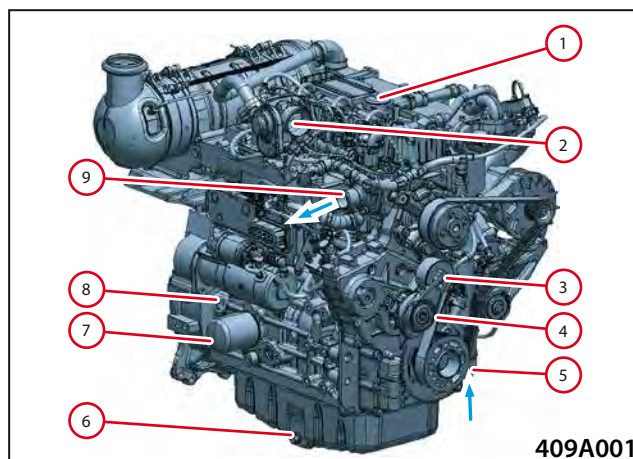
**7.1. Description of the engine and basic components**

Engine name plate



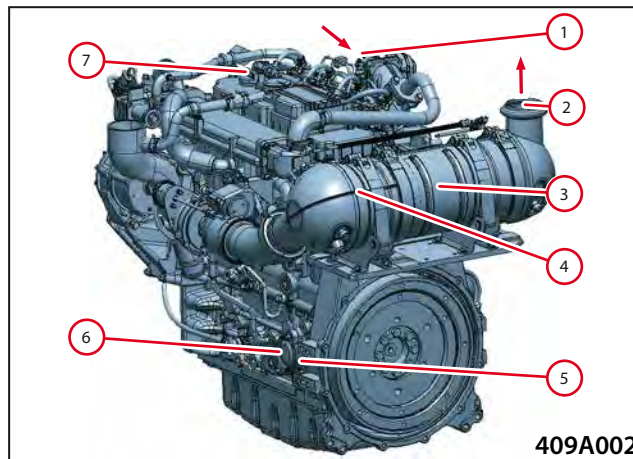
View from right (example)

- 1 - Crankcase breather
- 2 - Throttle valve
- 3 - Tension pulley
- 4 - V-rib belt
- 5 - Coolant inlet
- 6 - Lubricating oil drain plug
- 7 - Lube oil replacement filter
- 8 - Lubricating oil dipstick
- 9 - Coolant outlet

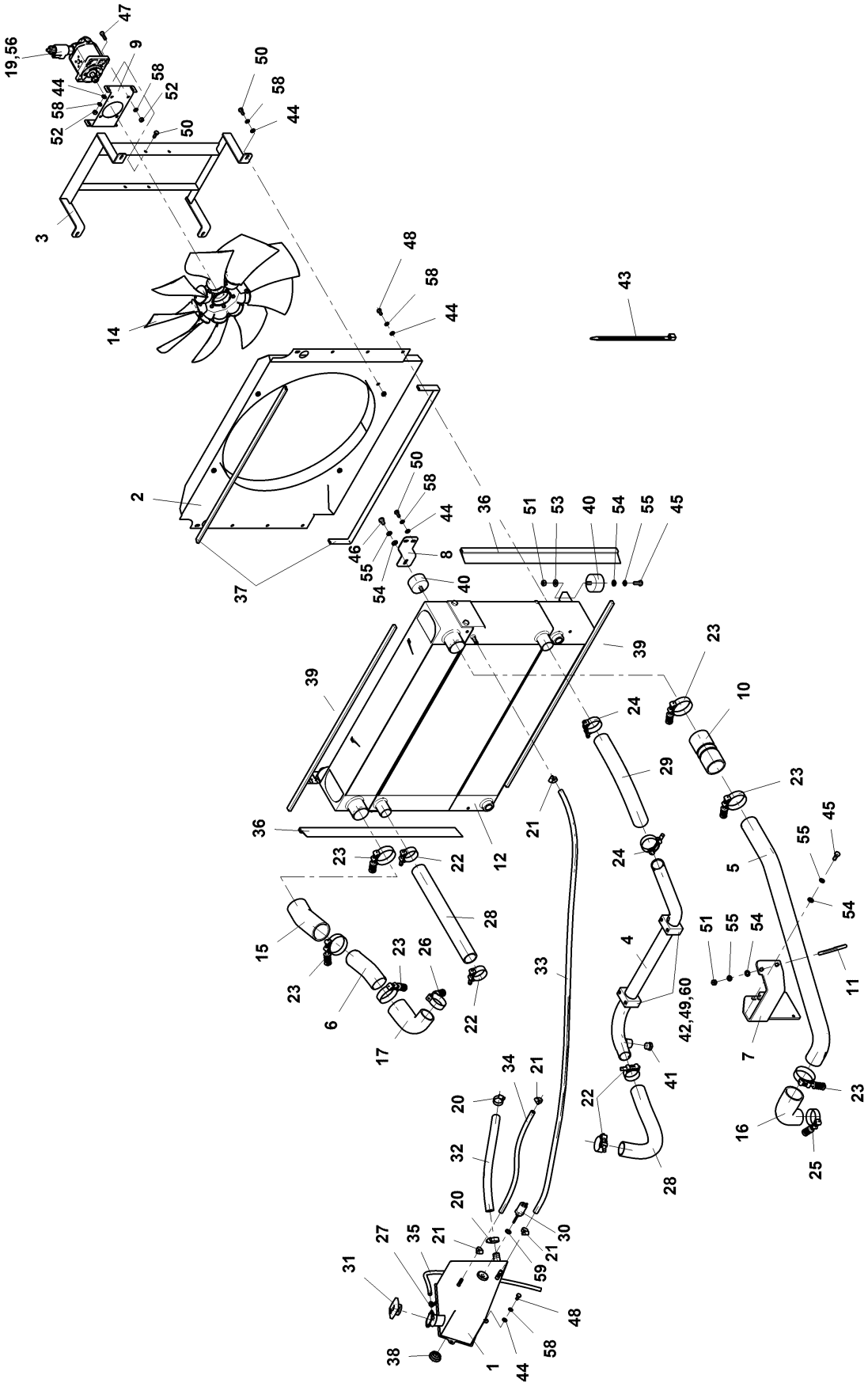


View from left (example)

- 1 - Combustion air inlet
- 2 - Exhaust outlet
- 3 - Diesel particle filter
- 4 - Diesel oxidation catalytic converter
- 5 - Lubricating oil dipstick - Optional
- 6 - Lube oil replacement filter - Optional
- 7 - Lubricating oil filling

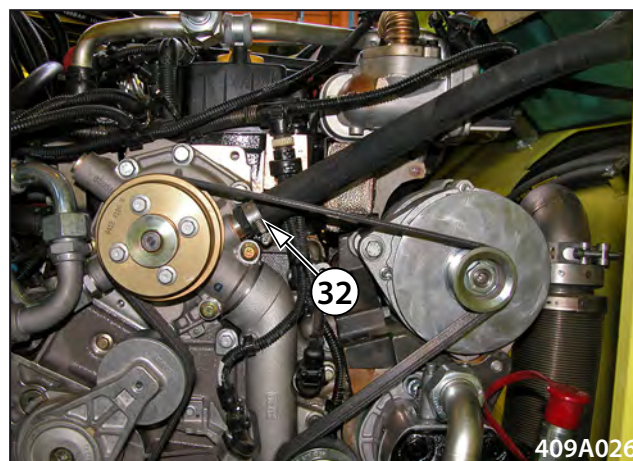


# 001-126



4-15789

Remove the hose (001-126-32).



Remove the holder with the hydraulic cube.



Lift the holder and secure it using the girt band.



Disconnect the wire 111 from the alternator.



**8.3. Steering pump removal**

**Personal protective equipment**



**Service tools**

Wrench set standard

Vessel for capturing any leaking fluids

Vessel for hydraulic oil 60 l (15,9 gal US)

End caps for hydraulic components and hoses

Torque wrench



**Service tools**

Hydraulic oil as defined in the Media specification



**Service instructions**

Proceed in reverse order when reassembling.

Blind the hose ends and pump outlets.

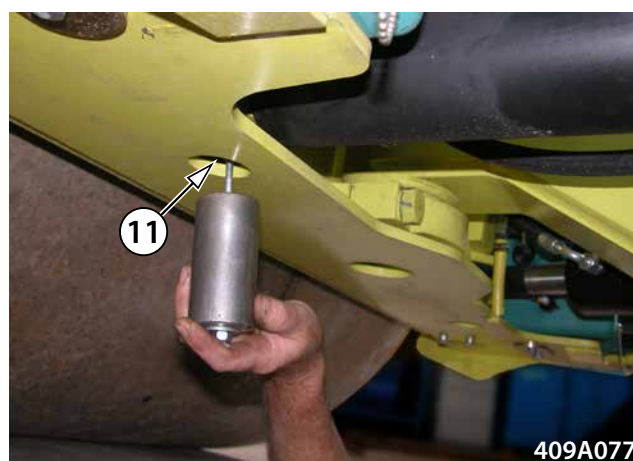
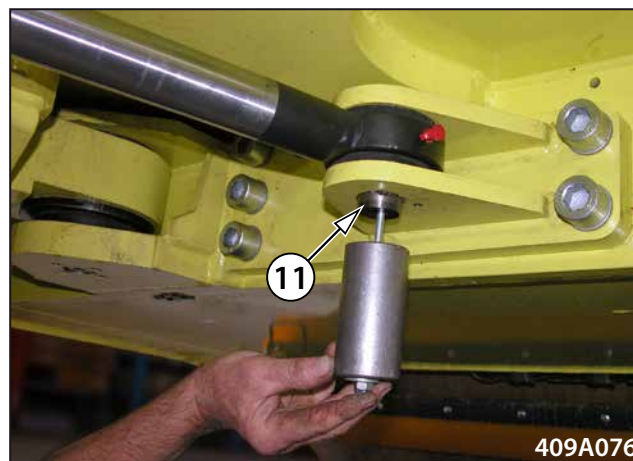
After the pump installation, refill the hydraulic oil to the specified limit.

Tighten the screws to specified torque defined in chapter 16.4. Tightening Torque Values

Remove the pins (003-065-11).

**Note**

Apply grease on the surfaces to install the piston rod in the bracket.

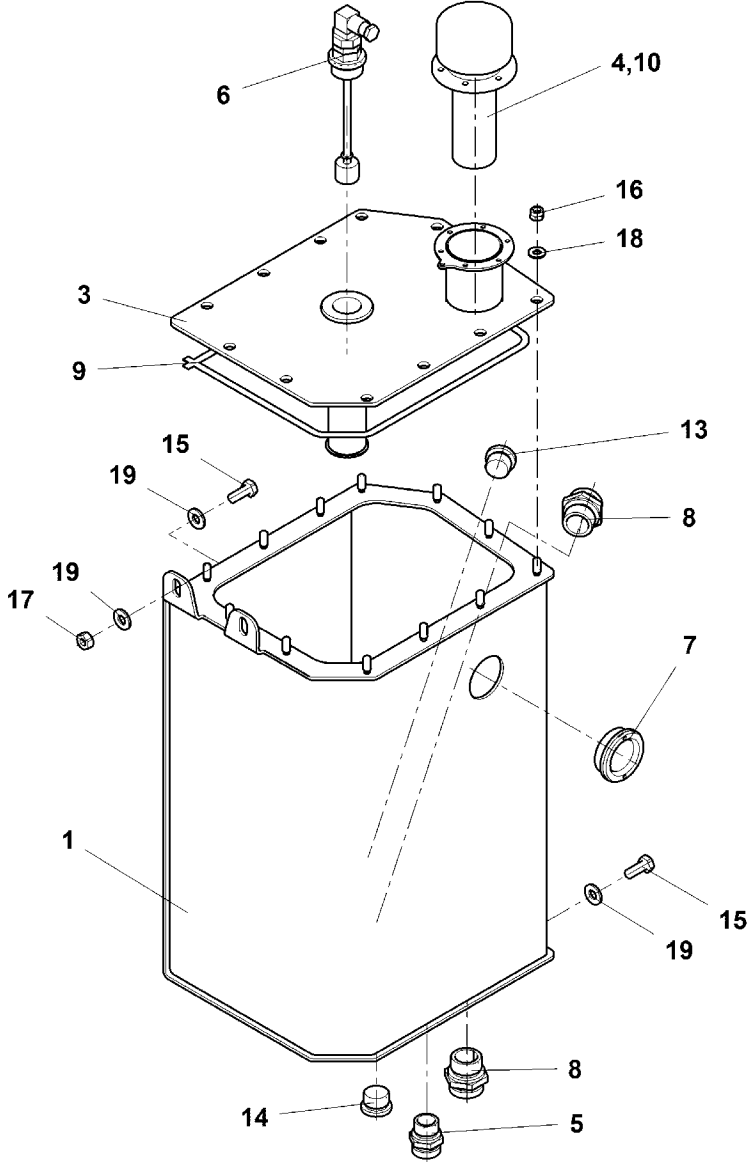


Take out.

After the installation, refill the hydraulic oil to the specified limit.



005-360



## 8.9. Removal of the steering joint from the machine

### Personal protective equipment



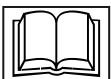
### Service tools

Crane with a sufficient lifting capacity  
 Slings with a sufficient lifting capacity  
 Wrench set standard  
 Torque spanner  
 Wrench set inbus  
 Hydraulic jack with capacity of 6t  
 Air driver  
 End caps for hydraulic components and hoses  
 Press  
 Torque wrench



### Service material

Grease as defined in the Media specification  
 Molyka G (ISO 6743/9 CCEB 2/3, DIN 51 502 KF2/3K-30)



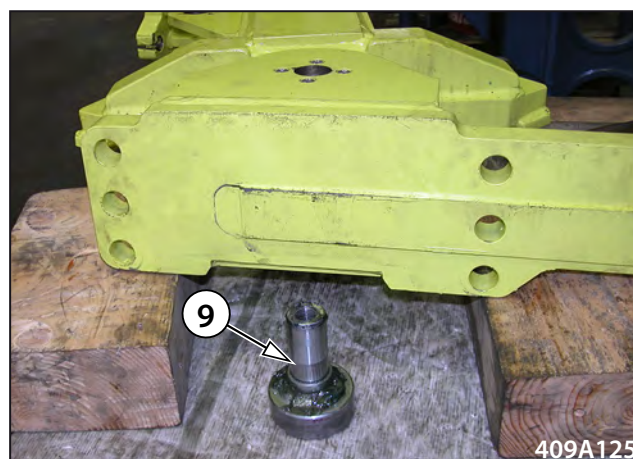
### Service instructions

Blind the hose ends and hydraulic motor outlets.  
 Proceed in reverse order when reassembling.  
 Tighten the screws (003-065-56) with the torque 725 Nm (535 lbft).  
 When assembling, glue the sleeve (003-065-26).  
 Set the bush (003-065-12) opposite holes in the bracket (003-065-1).  
 Tighten the nut (003-065-41) with the torque 50 Nm (37 lbft).  
 Apply the grease Molyka G (ISO 6743/9 CCEB 2/3, DIN 51 502 KF2/3K-30) on the bearings (003-065-32) and bushes (003-065-13).  
 Apply grease on the surfaces to install the arm (003-065-4) in the bracket.  
 Glue the seal rings (003-065-025) when reassembling.  
 Tighten the screws to specified torque defined in chapter 16.4. Tightening Torque Values

Mount the screw M20x150. Force out the screw (003-065-9).

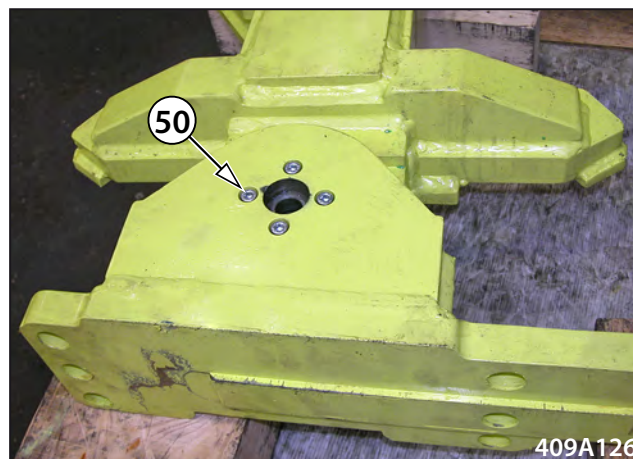


409A124



409A125

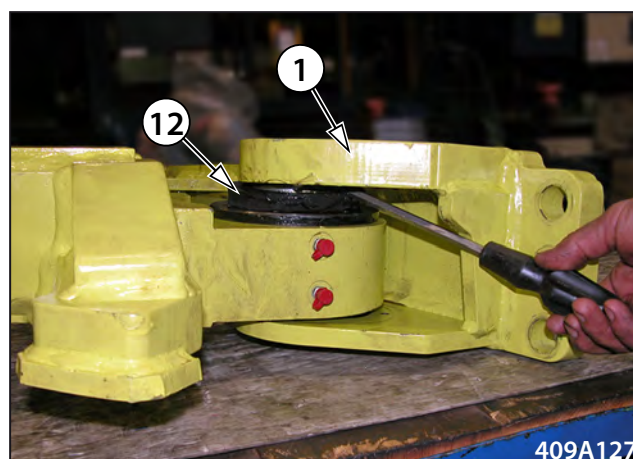
Remove the screws (003-065-50).



409A126

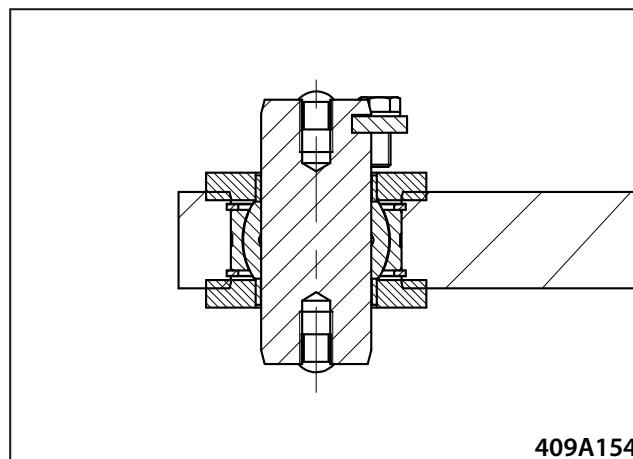
Push out the bush (003-065-12) from the bracket shoulder (003-065-1).

Remove the brackets.

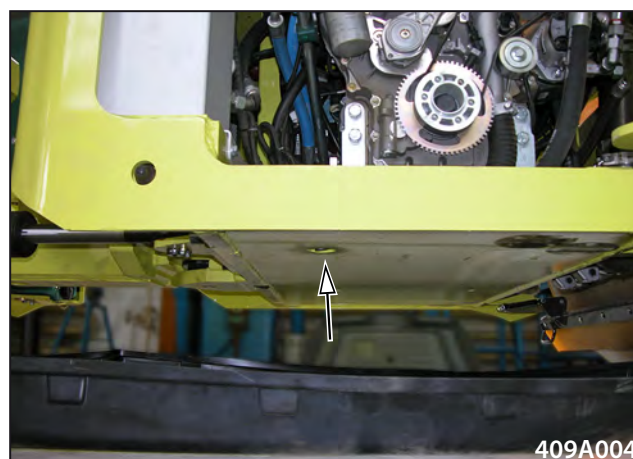


409A127

**Front bearing**



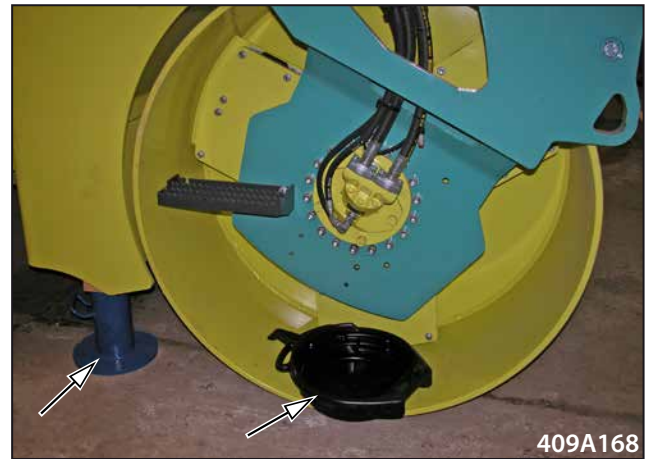
Drain the coolant. Drained volume 23 l (6,1 gal US).



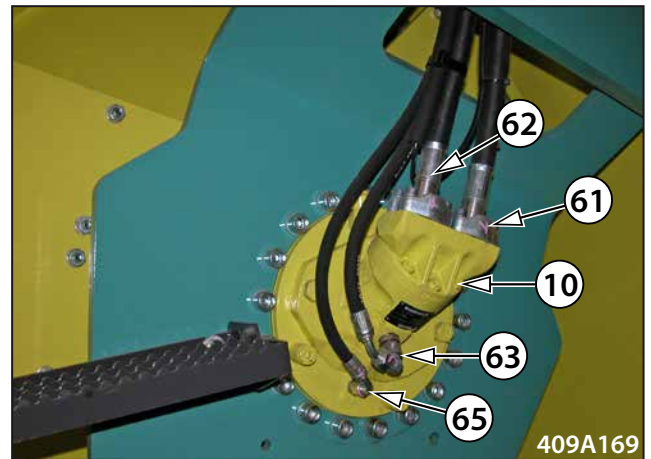
Dismount the covers.



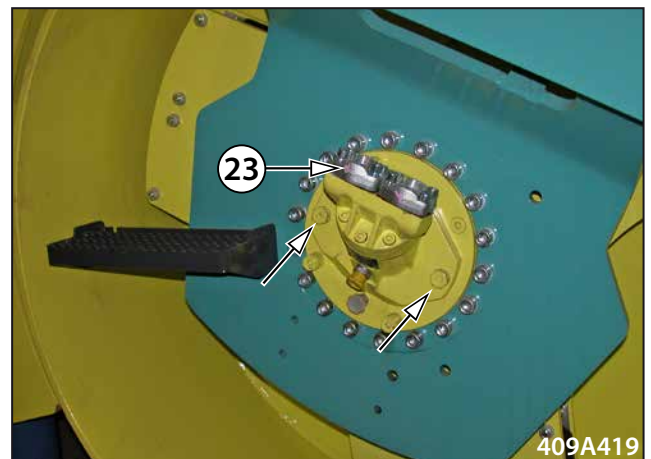
Put the vessel for capturing any leaking fluids under the travel hydraulic motor.



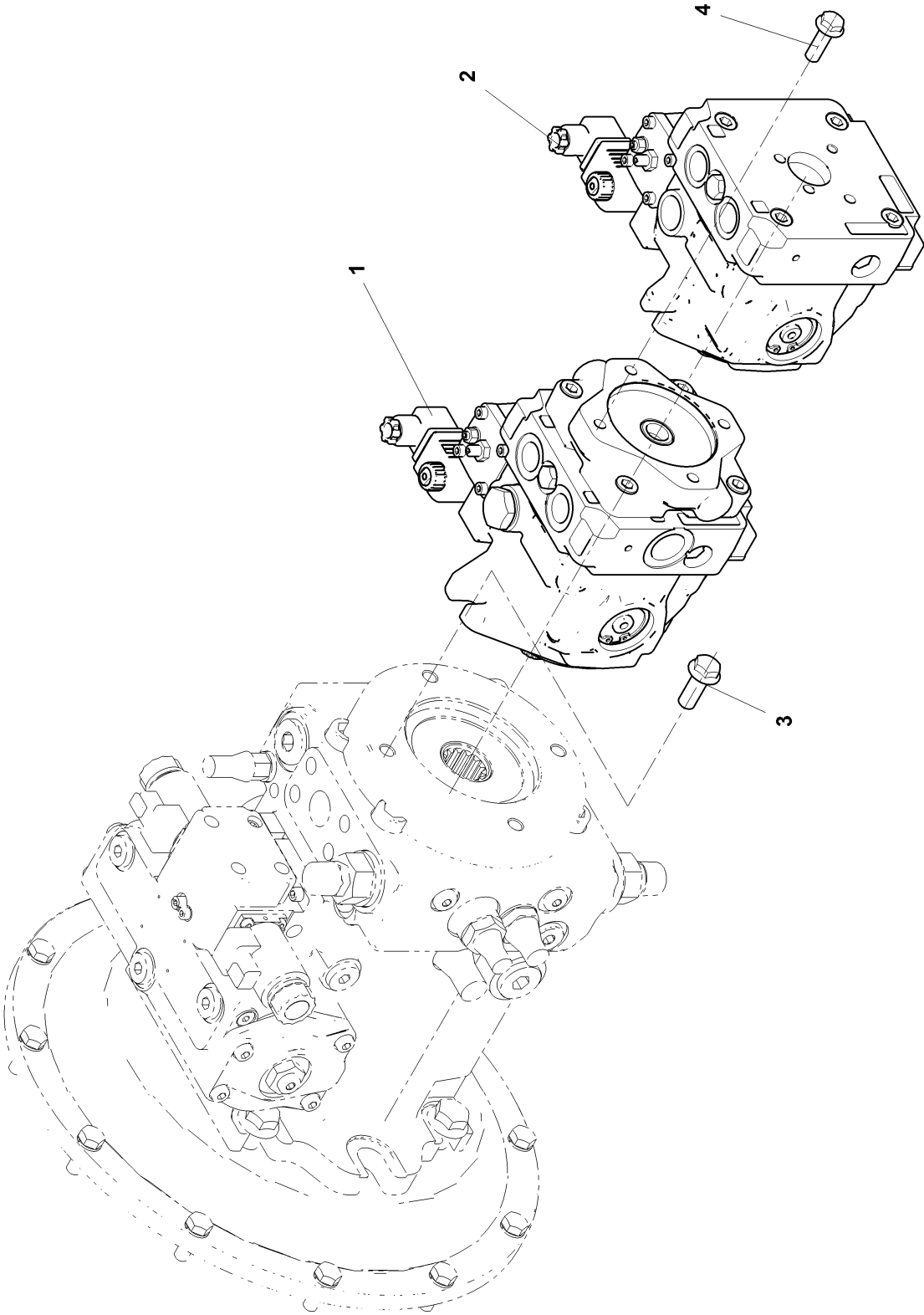
Remove the hydraulic hoses (005-311-61), (005-311-62), (005-311-63), (005-311-65) from the hydraulic motor (005-311-10). Mount the plugs.



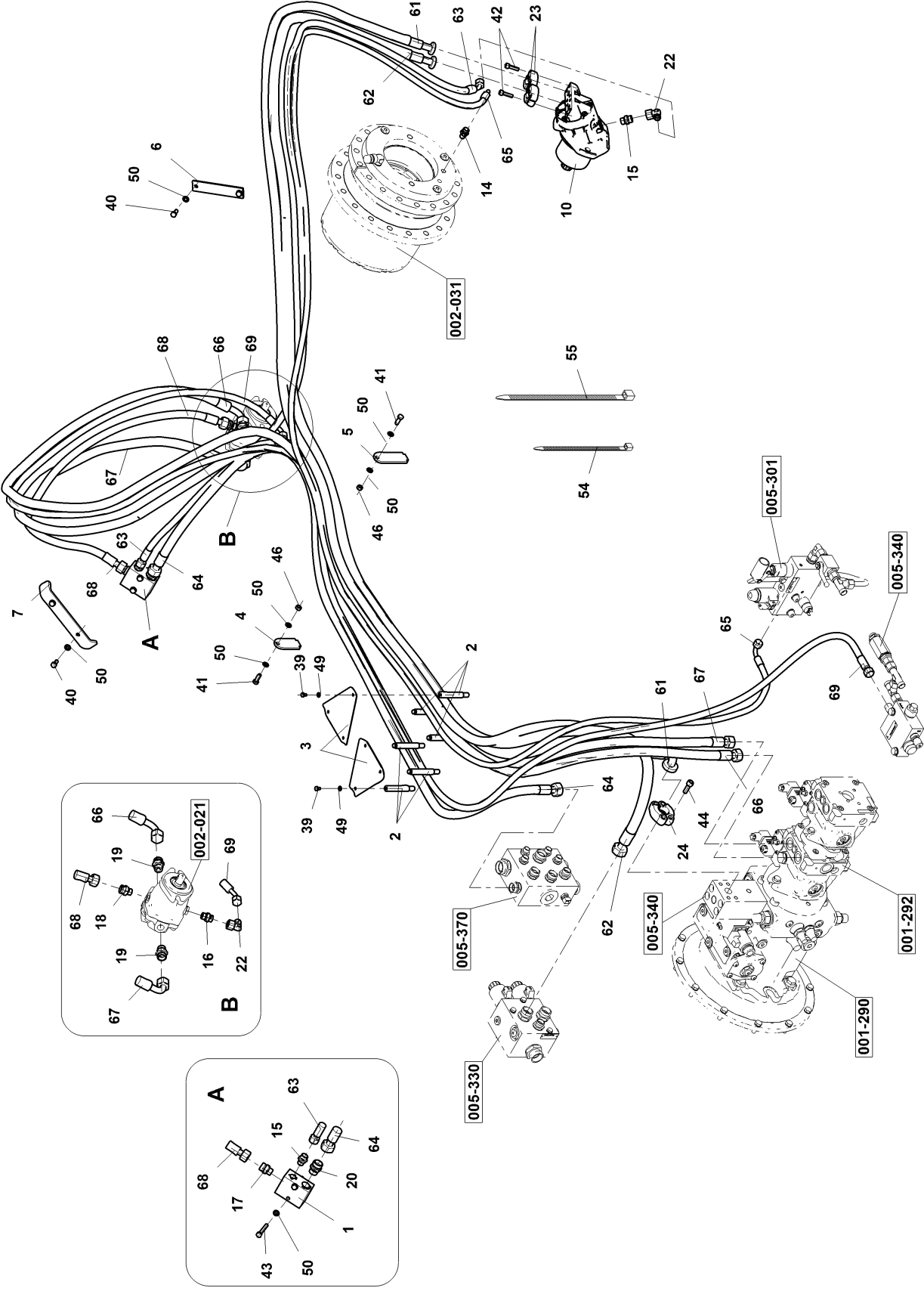
Remove the screws.  
Check the seal ring.  
Remove the yokes (005-311-23) and mount on the new hydraulic motor.



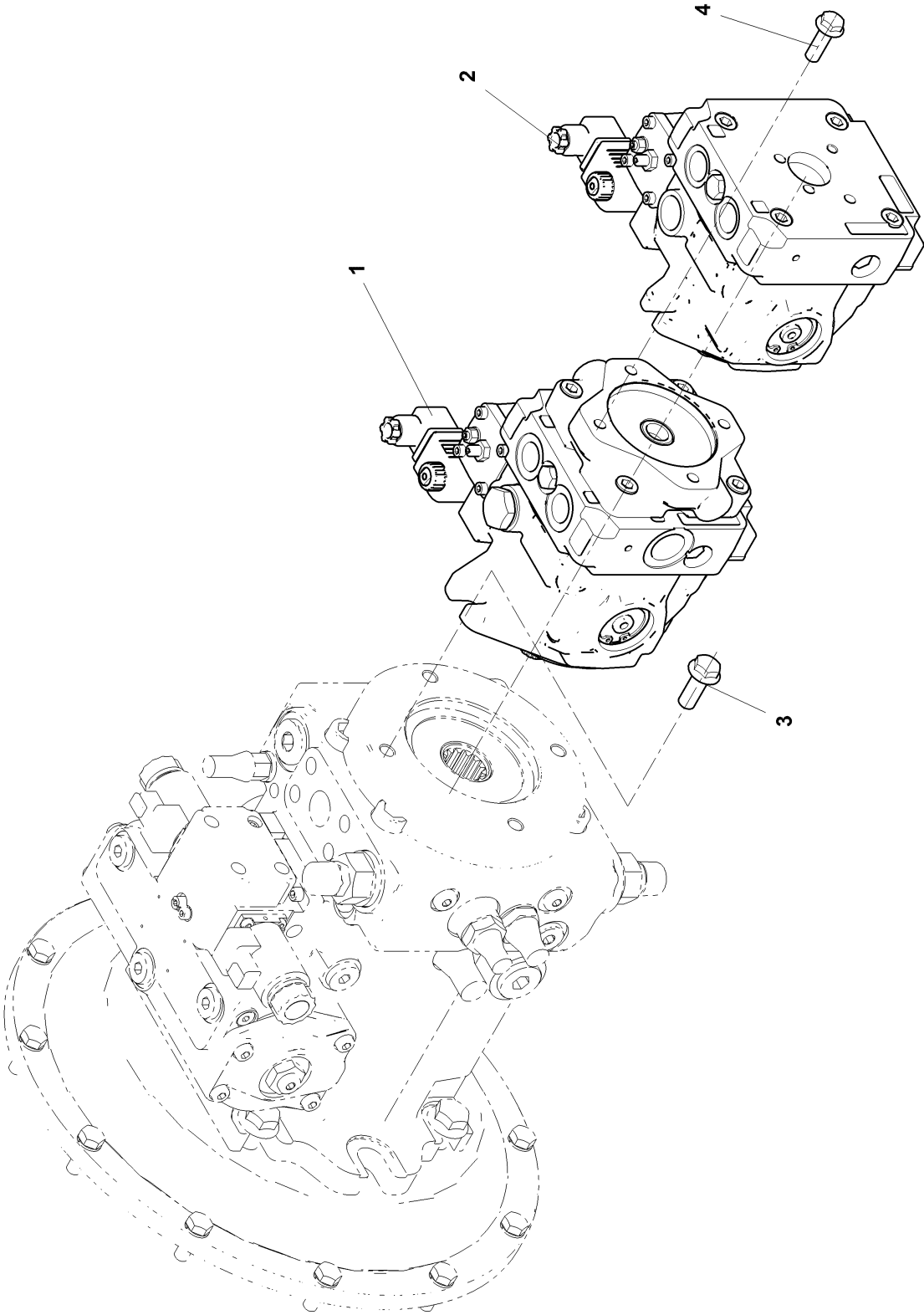
001-292



# 005-311



001-292



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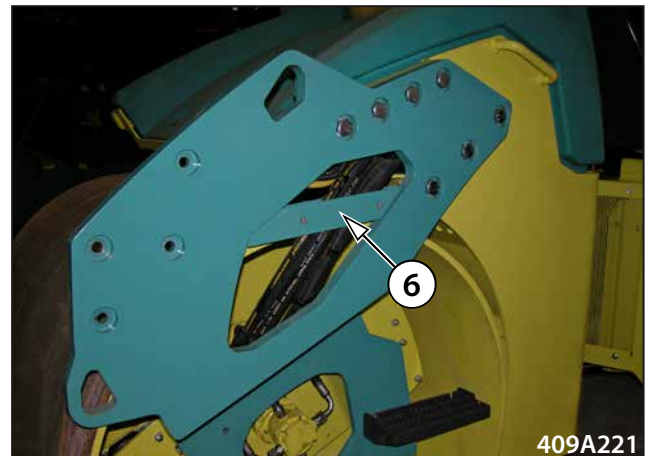
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Lay it aside.

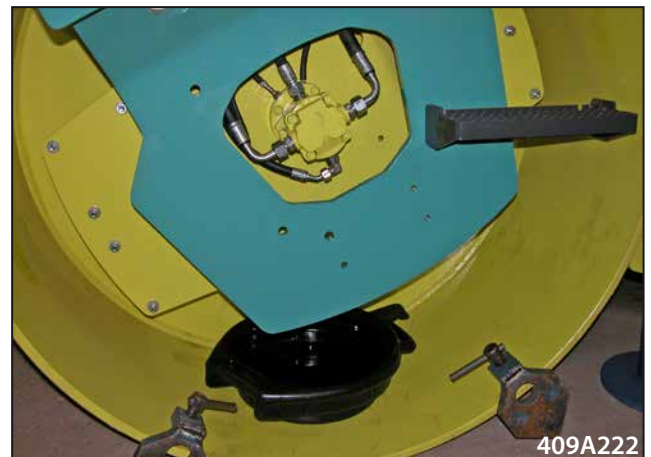


**Rear drum - right side**

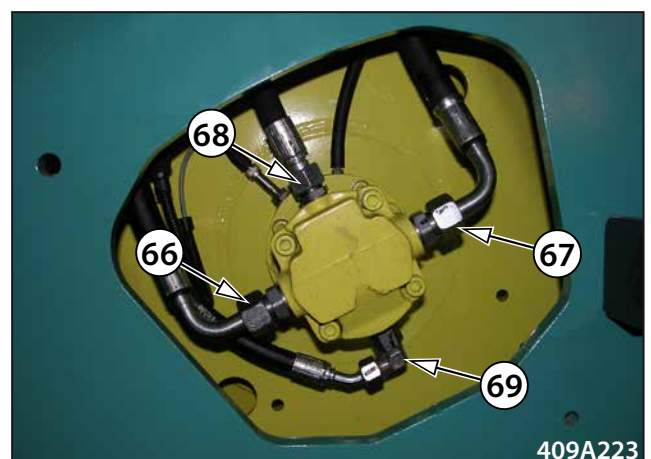
Remove the holder (003-081-6).



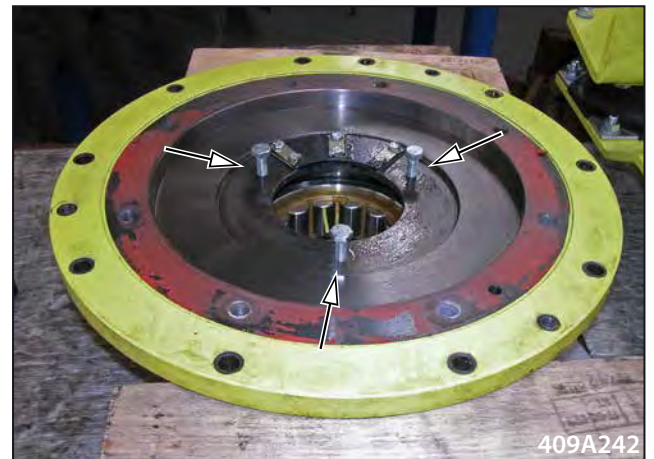
Put the vessel for capturing any leaking fluids under the vibration hydraulic motor.



Remove the hydraulic hoses (005-311-66), (005-311-67), (005-311-68), (005-311-69) from the hydraulic motor (002-021-12). Mount the plugs.



Using the screws M10x100 force the bearing (002-021-15) away evenly.



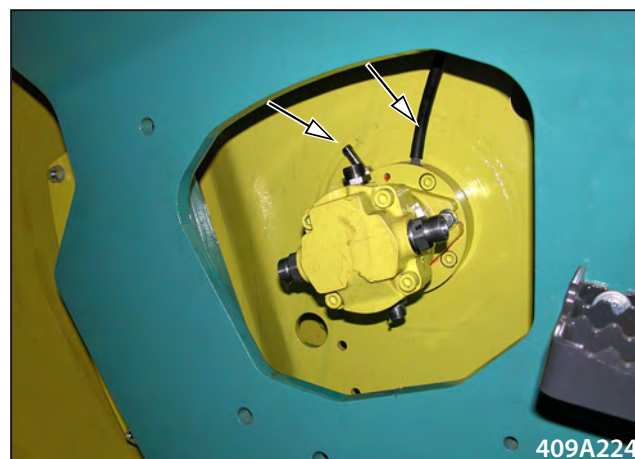
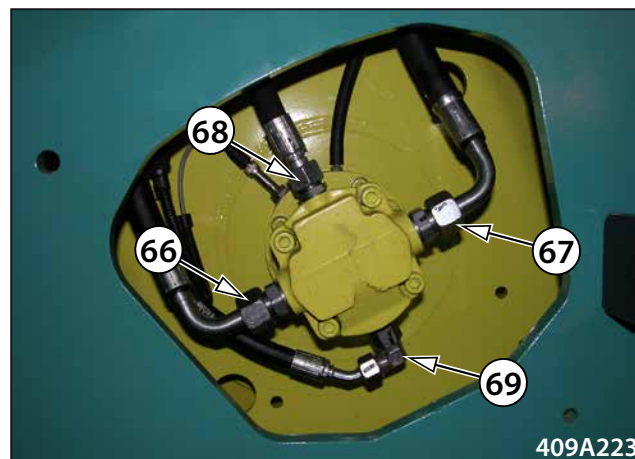
Mount the lifting lug M10. Hang the vibrator on a crane with sufficient load capacity. The vibrator weight is 90 kg (176 lb).



Remove the vibrator and lay it aside.



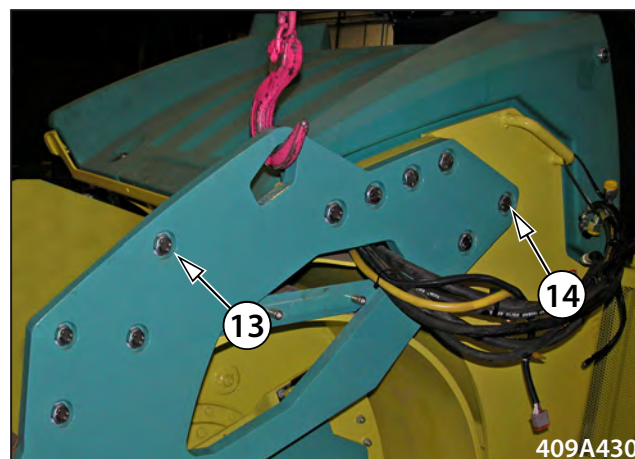
Remove the hydraulic hoses (005-311-66), (005-311-67), (005-311-68), (005-311-69) from the hydraulic motor (002-021-12). Mount the plugs. Disconnect the sensor and bleeding hose.



Hang the sidewall (003-081-1) on the crane with a sufficient capacity. The sidewall weight is 200 kg (441 lb). Remove the screws (003-081-13), (003-081-14).

**Note**

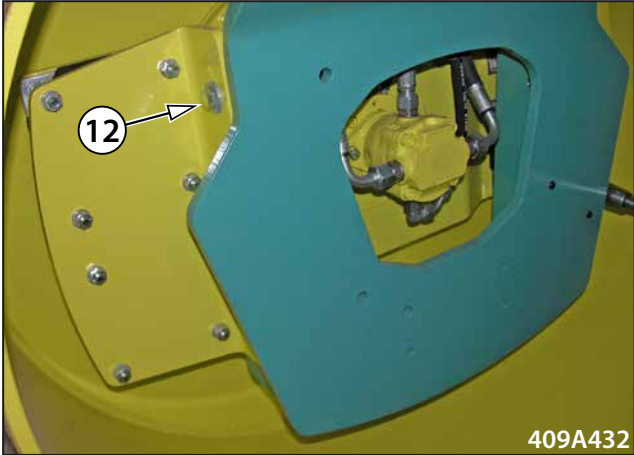
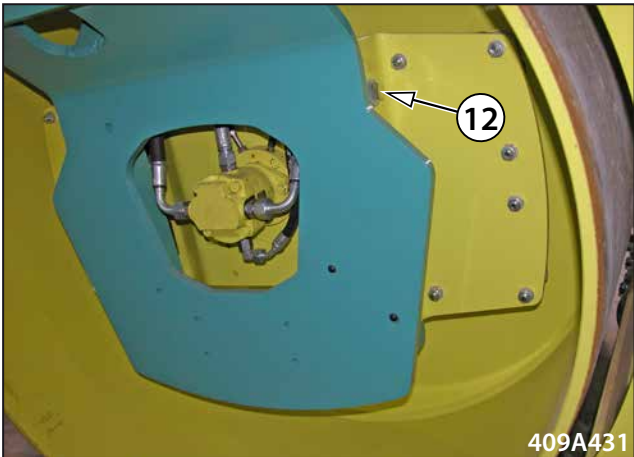
Secure the screws (003-081-14) with the adhesive Novadurit ZV 115.



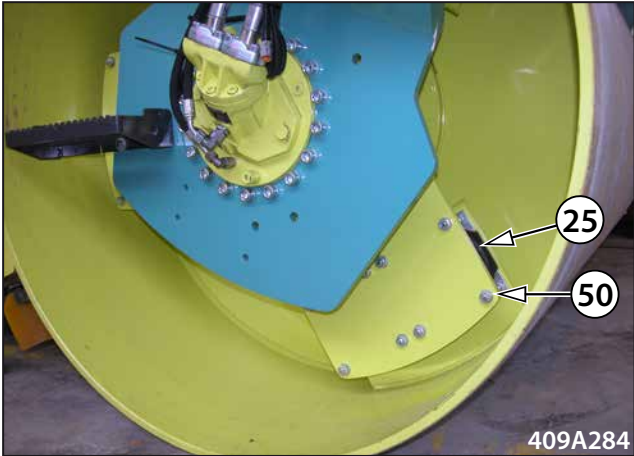
Remove the screws (003-081-12).



Loosen the screws (003-081-12).



Remove the screws (002-031-50) of the rubber-metal (002-031-25).

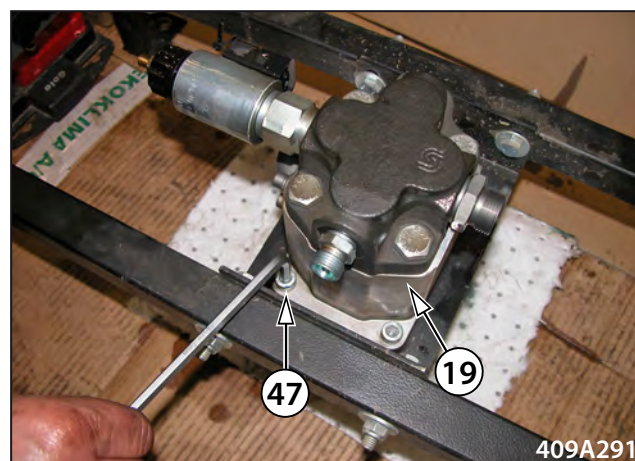




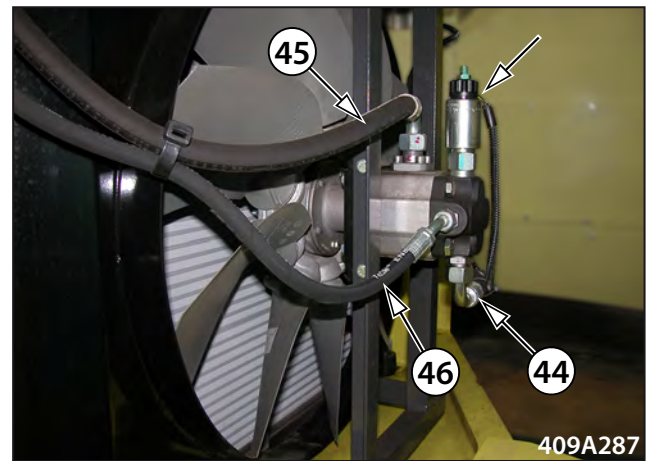
Remove the flange using a puller.



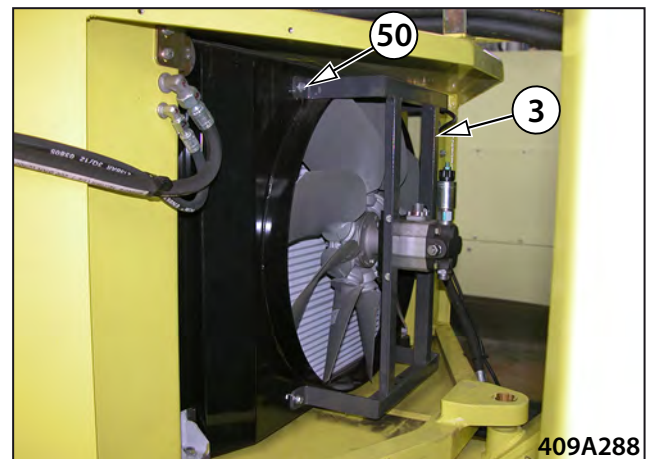
Remove the screws (001-126-47) of the hydraulic motor (001-126-19).



Disconnect the valve connector. Remove the hydraulic hoses (005-370-44), (005-370-45), (005-370-46). Mount the end caps.



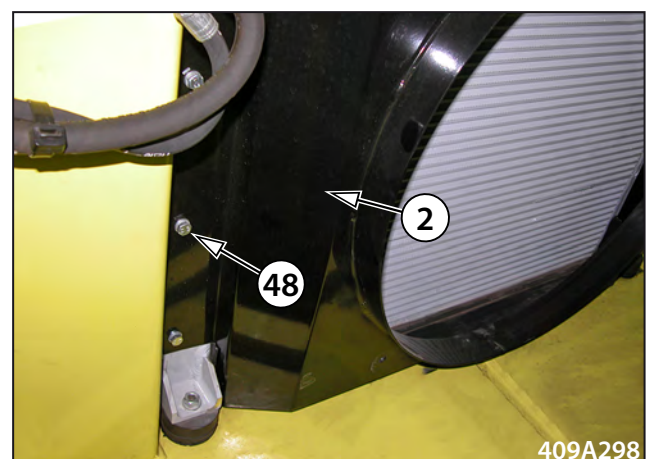
Remove the screws (001-126-50) of the holder (001-126-3).



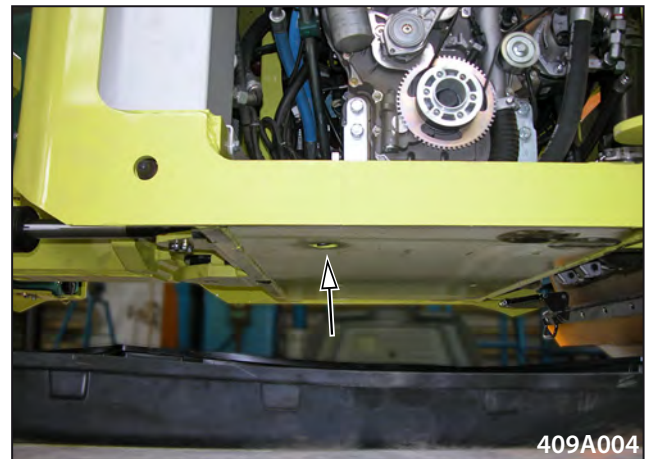
Take out the holder (001-126-3) with the hydraulic motor (001-126-19) and the propeller (001-126-14).



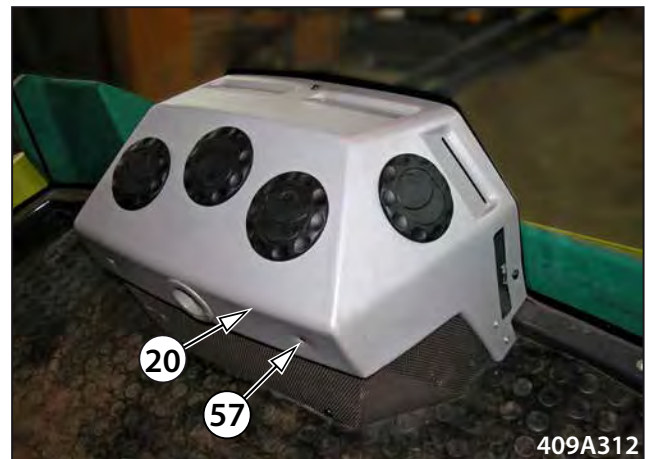
Remove the screws (001-126-48) of the cover (001-126-2).



Drain the coolant. Drained volume 23 l (6.1 gal US).



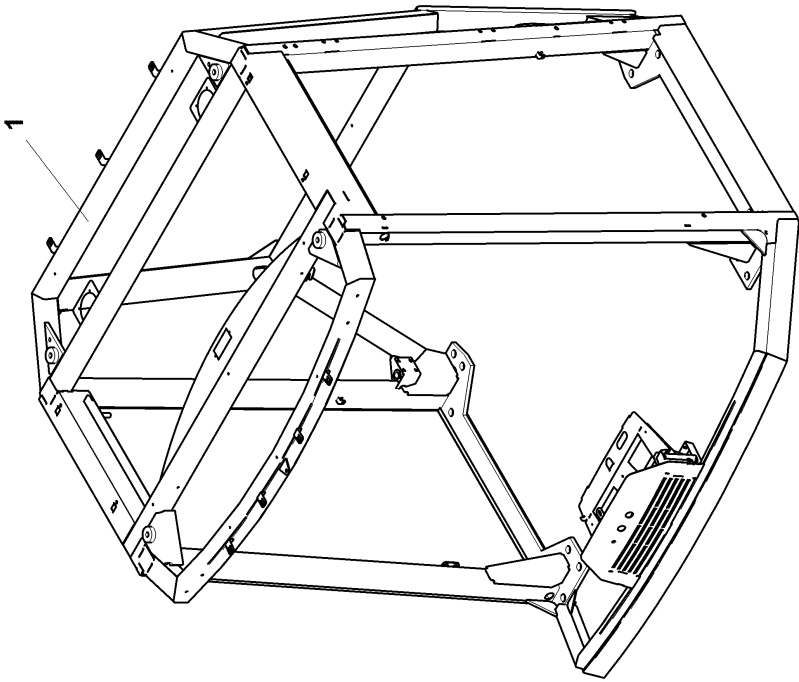
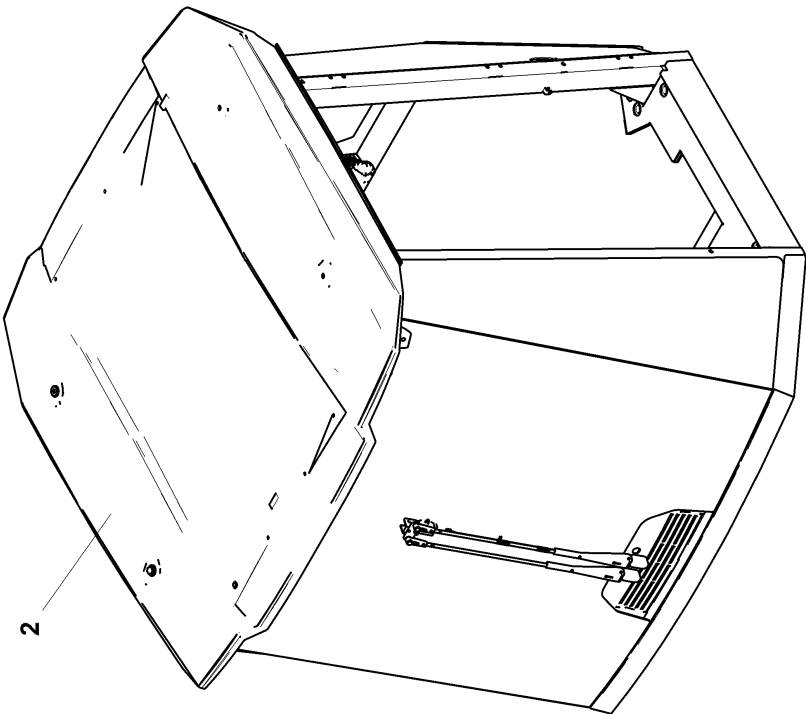
Remove the screws (004-160-002-57). Take out the cover (004-160-002-20).



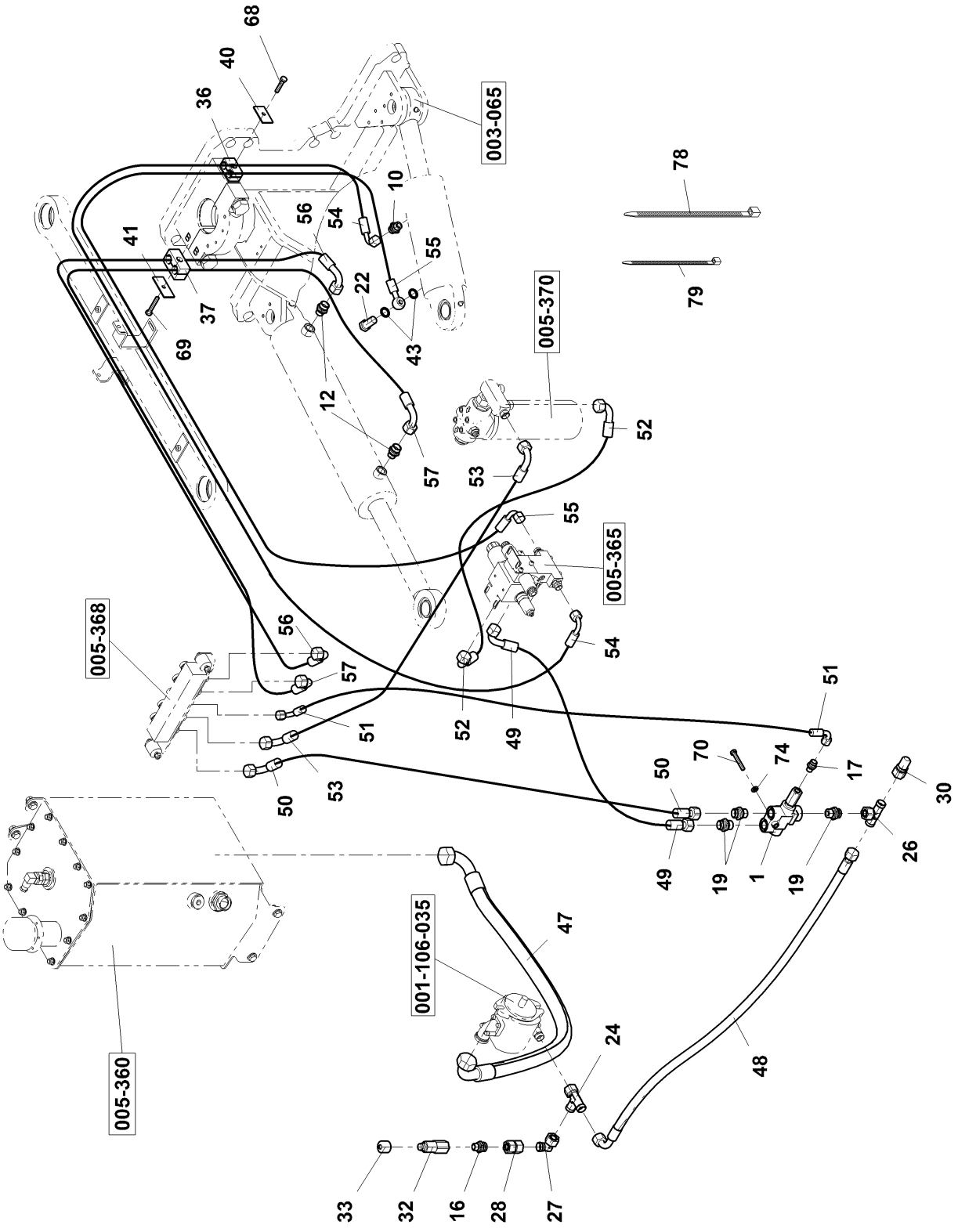
Remove the clips and take out the ball valve (004-160-002-67).



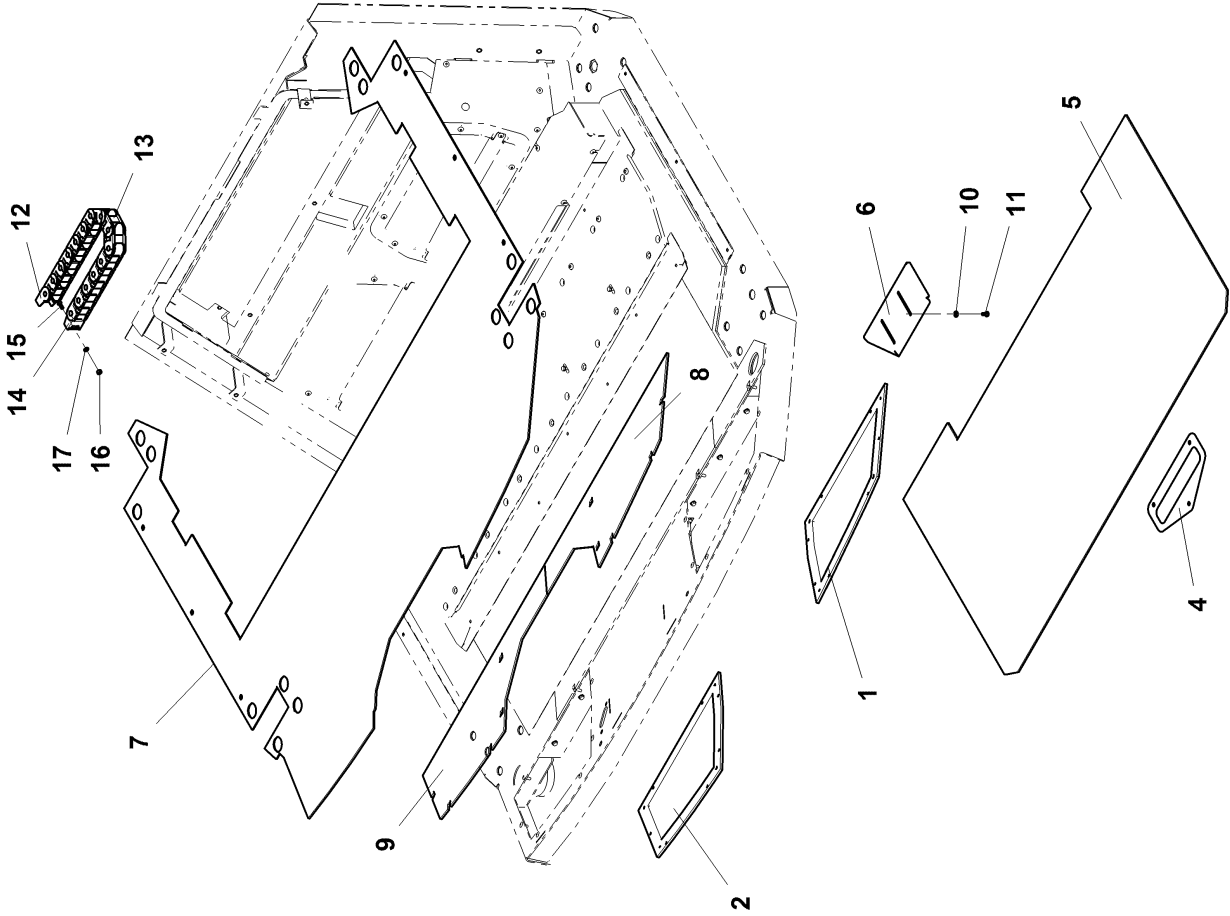
004-160



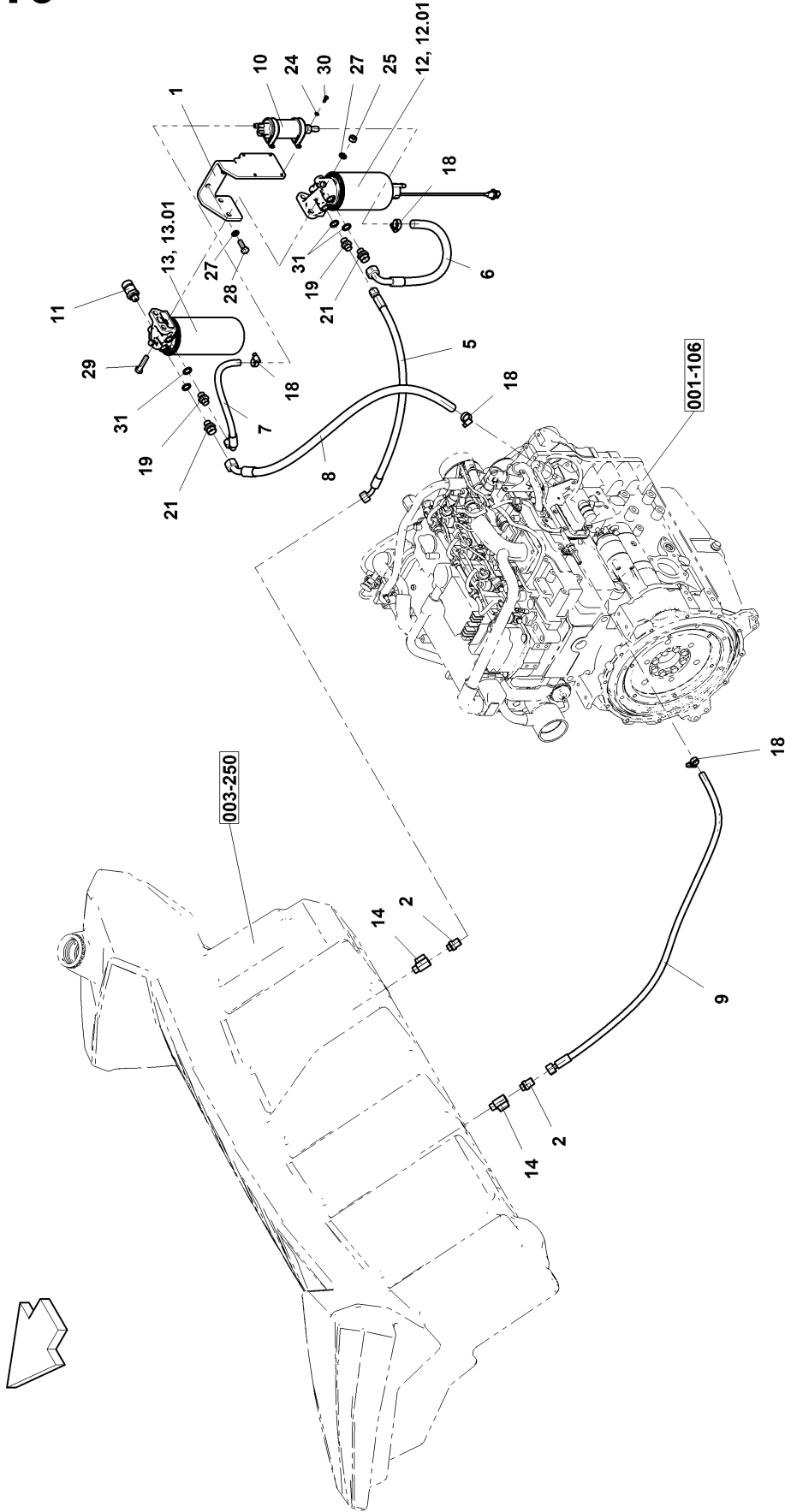
# 005-364



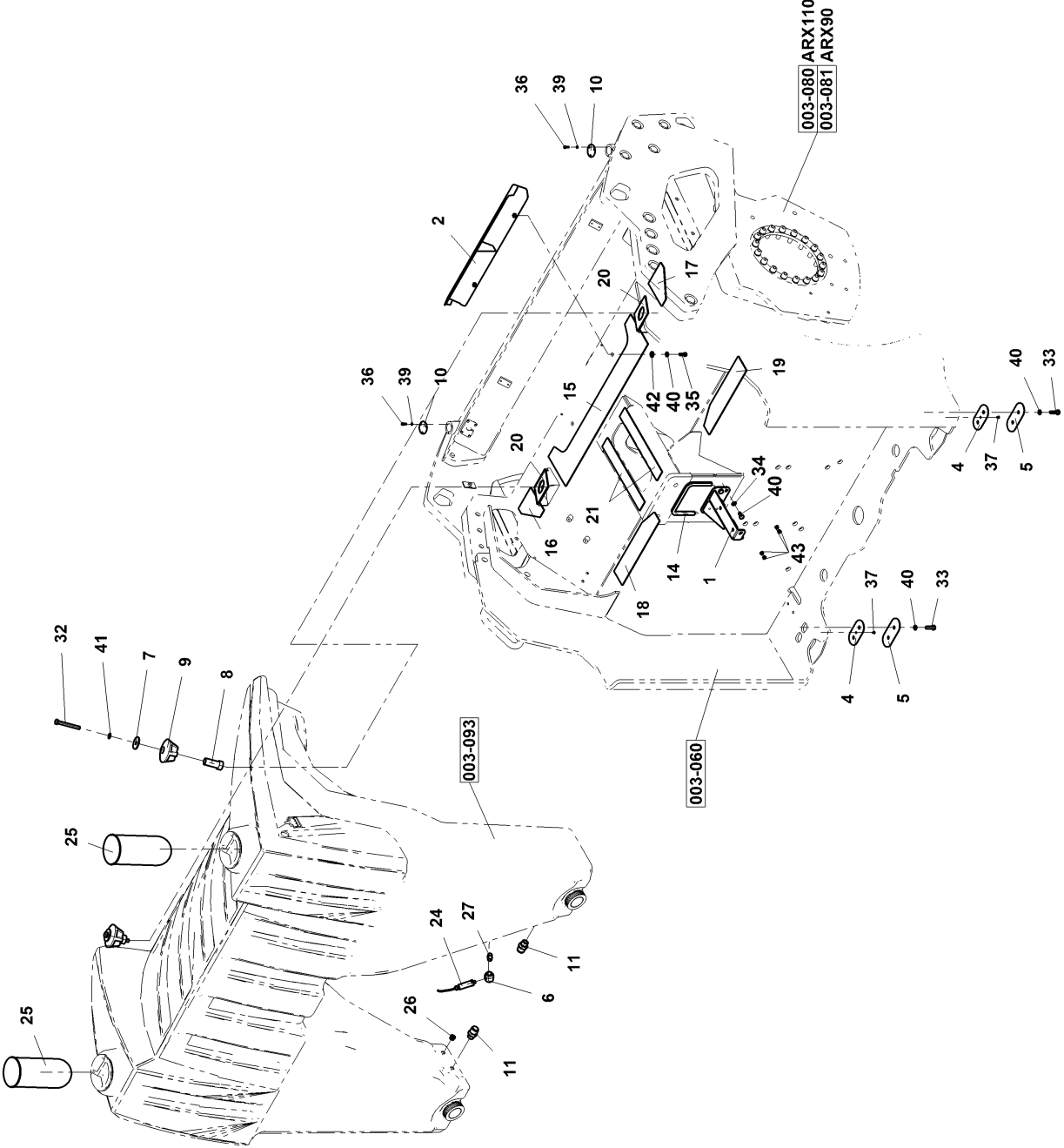
004-151



# 001-110



003-061



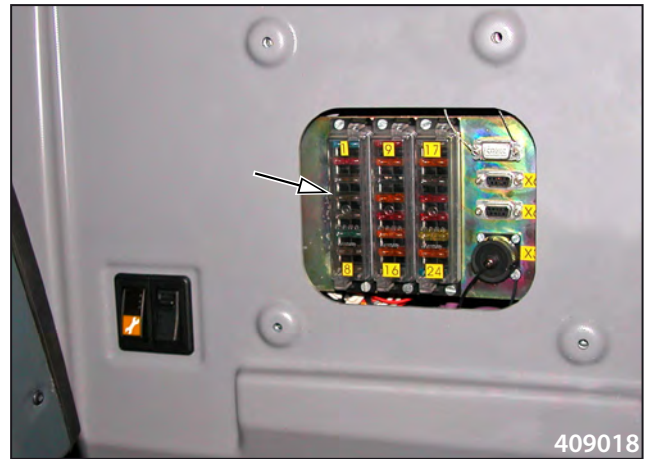
**15.3. Fuse positioning**

**It contains F1 - F28 fuses.**

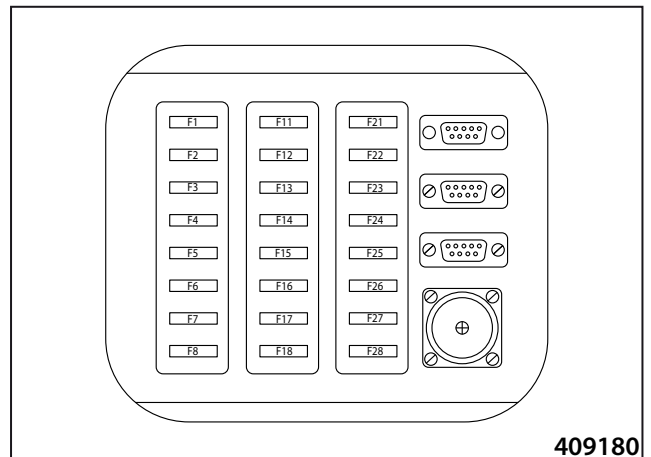
- F1 - 15A ..... Mounting socket
- F2 - 10A ..... front parking lights, front headlamps, rear lights
- F3 - 7.5A ..... rear headlamps
- F4 - 7.5A ..... turn indicators, beacon, horn, cab lighting, coil of engine time relay (A10)
- F5 - 7.5A ..... switch box, lighting relay coils
- F6 - 35A ..... power supply of computer Rexroth RC20-10/30
- F7 - 7.5A ..... seat control
- F8 - 7.5A ..... working lights, drum lighting
- F11 - 5A ..... drum sensors (speed, frequency), el. magnets of vibration, water level sensor, infrathermometer, emulsion sprinkling relay
- F12 - 5A ..... emulsion sprinkling
- F13 - 10A ..... water sprinkling
- F14 - 5A ..... brake lights, reverse horn, alternator excitation
- F15 - 5A ..... total STOP, service mode
- F16 - 1A ..... memory of computer Rexroth RC20-10/30
- F17 - 7.5A ..... lever Gessmann, display
- F18 - 3A ..... diagnostic socket of engine
- F21 - 10A ..... autoradio
- F22 - 10A ..... heating control, rear window heating control, air-conditioning relay
- F23 - 10A ..... wipers, screen washers
- F24 - 10A ..... heating fans
- F25 - 20A ..... rear window heating
- F26 - 5A ..... front working lights
- F27 - 5A ..... rear working lights

**In the engine compartment**

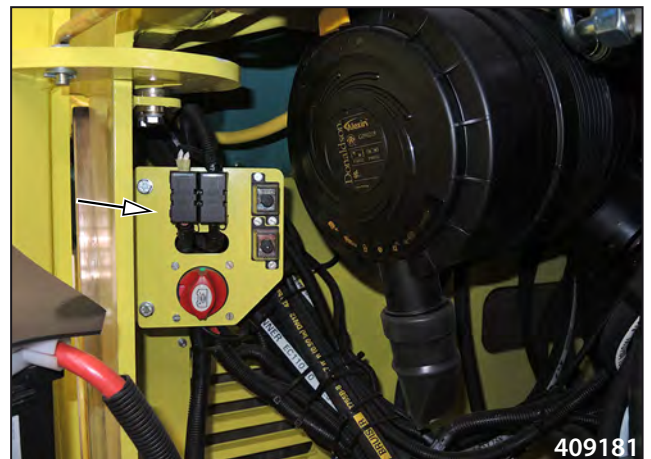
- F31 - 80A ..... main fuse
- F32 - 15A ..... air-conditioning
- F33 - 10A ..... fuel pump
- F34 - 15A ..... autoradio (memory)
- F36 - 125A ..... pre-heating
- F37 - 30A ..... engine electronics



409018



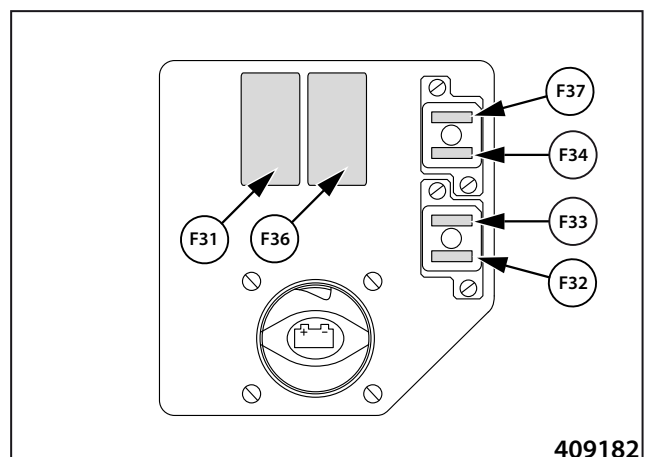
409180



409181



**Always replace the fuses with the ones of identical value!**



409182

## RIGHT ARM REST

### Travel lever removal

Dismount the cover.



Disconnect the connectors X1, X2, X3, X4.

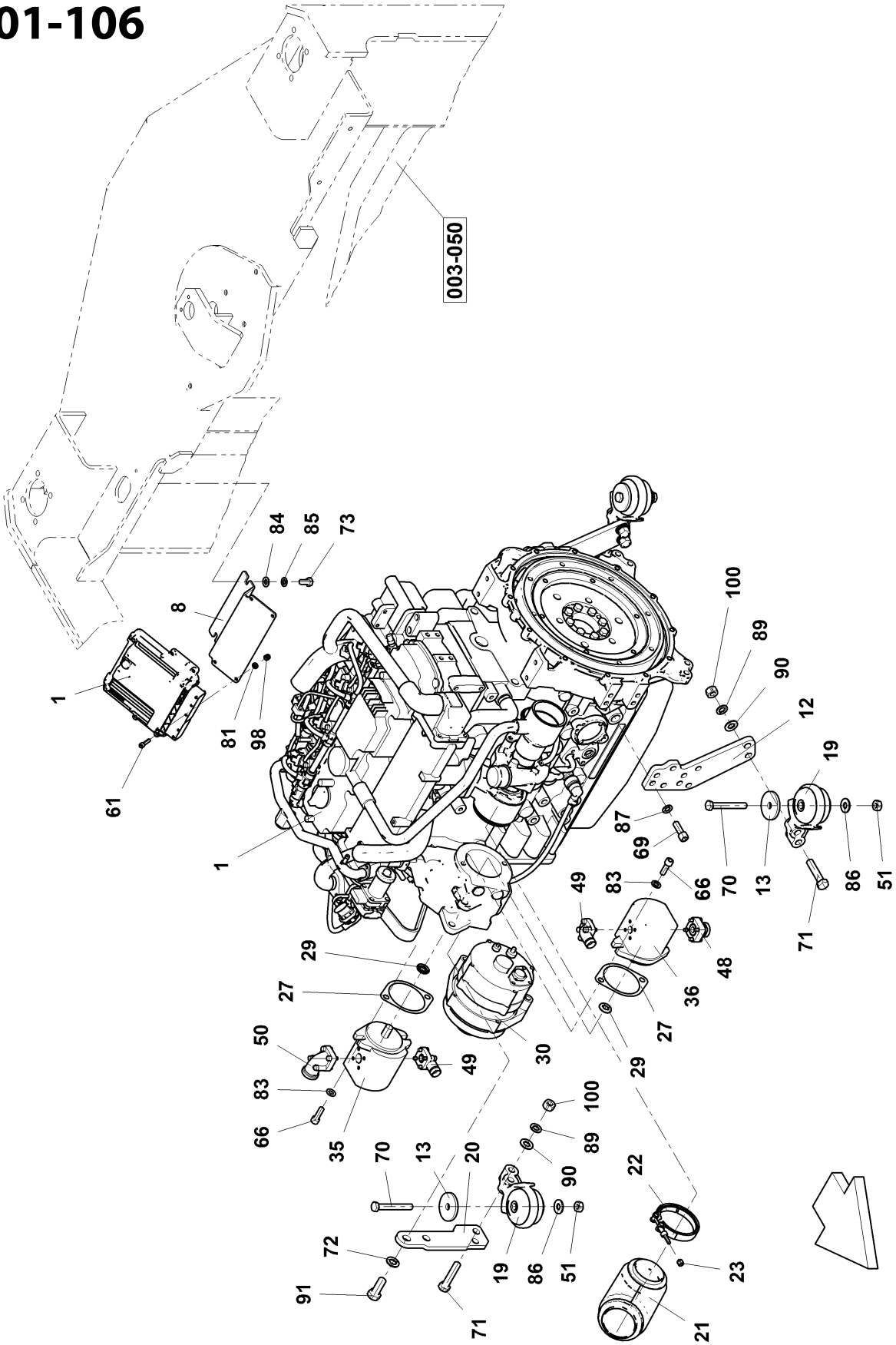


Dismount the screws.

Remove the lever.



# 001-106



4-16093A



CABLE HARNESS LEGEND:

- Faston
  - Ring terminal
  - Distributor cap
  - Splice block
  - Contact
  - Sealing plug
  - Sealing wire seal
  - Mask cut
  - No. 6.3 insulation sleeve
  - Spina
  - Reducer
  - Clamp
  - Terminal
  - End of line SEM straight
  - Resistor
  - Inductor
  - Solenoid
  - Rectangular connector
  - Piggy connector
- Wires:**
- R - 1 - 1200 (100) Wire color
  - Splice mm length
  - Wire number
- Cable:**
- H03VV-F2X0.75 - 2500  
 Type length
- Conductor:**
- NW13 - 700  
 Type length

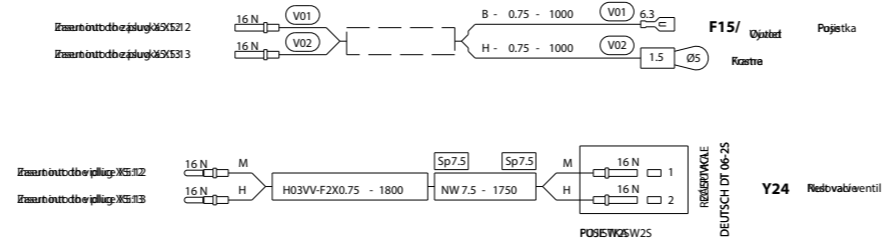
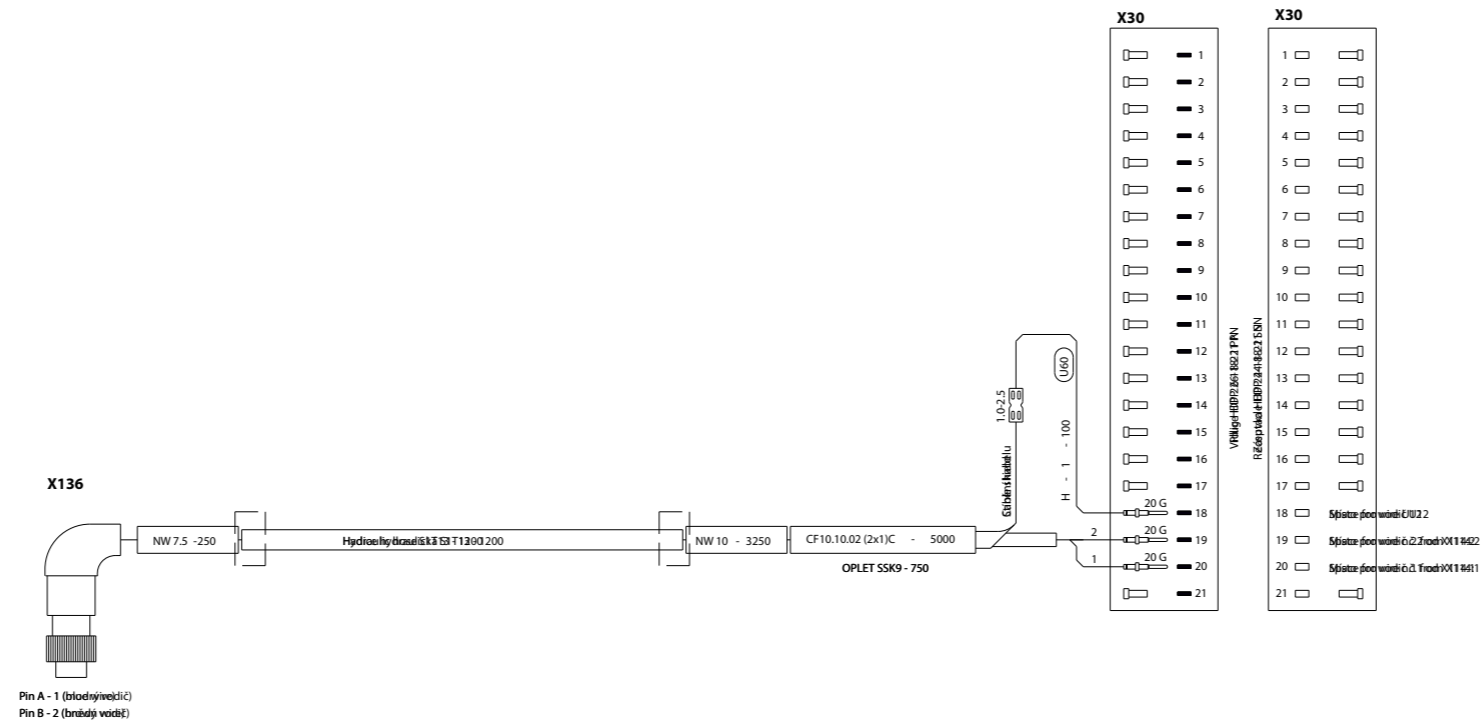


TABLE OF COLOR SYMBOLS:

|   |         |
|---|---------|
| B | Bílá    |
| C | Černá   |
| H | Modrá   |
| M | Modrá   |
| R | Redá    |
| S | Červená |
| Y | Žlutá   |
| Z | Černá   |





CABLE HARNESS LEGEND:

|  |                       |
|--|-----------------------|
|  | Faston                |
|  | Ring lock             |
|  | Ductile braid         |
|  | Braided shield        |
|  | Contact               |
|  | Seal plug             |
|  | Wire seal             |
|  | Mask cut              |
|  | Insulation sleeve     |
|  | Spina                 |
|  | Reducer               |
|  | Clamp                 |
|  | Terminal              |
|  | Straight SEM          |
|  | Resistor              |
|  | Filter                |
|  | Solenoid              |
|  | Rectangular connector |
|  | Plug connector        |

**Výška:**  
 R - 1 - 1200 (100)  
 Wire color, Spine, Height, Wire number

**Kabel:**  
 H03W-F2X0.75 - 2500  
 Typ, Height

**Ochrana:**  
 NW13 - 700  
 Type, Height

TABLE OF COLORS:

|   |        |
|---|--------|
| B | Biele  |
| C | Čierne |
| H | Hnedé  |
| M | Modré  |
| R | Redé   |
| S | Sivé   |
| Y | Žlté   |
| Z | Zelené |

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