Repair manual for
Exchanging locking mechanism
sensor JSK37C
Sensor-enabled fifth wheel couplings are parts that must comply with very high safety requirements.

This repair manual is designed to act as a guide to completing repair work on our sensor set.

It is essential that you use JOST spare parts. Modifications of any kind will render both the warranty and the type approval void.

Operation and installation are described separately in dedicated publications.

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1 Safety instructions

The relevant safety regulations in your country (for example Health & Safety at Work) apply for working with fifth wheel couplings, tractor units and semi-trailers.

The appropriate safety information in the owner's handbook for the tractor unit and the semi-trailer are valid and must be followed.

The permitted load data and safety information must be complied with during operation and installation.

Safety information which is directly linked to the specific activity is listed in the following sections for servicing and repair work. It is essential that you follow this safety information.

⚠️ Technical modifications reserved. The latest information can be found at: www.jost-world.com.
2.1 Standard tools

2.2 Special tools
- Ejector tool for Tyco HDSCS flat connector 2.8
- Ejector tool for Tyco HDSCS flat connector 1.6
Repair work

- Conversion work must be carried out by trained personnel in suitable workshops.
- Repair work is to be carried out using suitable tools and state of the art methods.
- Clean all parts thoroughly before assembly. Ensure that electrical plug connectors or compressed air connectors do not become soiled.
- Once the conversion work is complete, the function must be verified in accordance with the installation and operating instructions.
- Do not touch contacts on electronic components (e.g. plugs) with bare fingers.
- Do not allow the wiring harness to drop!
- Only use the new screws and nuts provided with the repair kit.
- Before carrying out any work on the electrical system, disconnect the battery.
- With the diagrams the work steps should be carried out in alphabetical order (e.g. a, b, c).
- Assembly is carried out correspondingly in reverse order.
- Instructions for assembly are identified in the diagram number or in the diagram itself with a diamond ◊.
- The torque values shown in the illustrations are required for the subsequent assembly process.

⚠️ The torque values shown in the illustrations must be used at all times. Worn, damaged and cracked parts must always be replaced.

3.1 Preparing the fifth wheel coupling

- Disconnect the electrical connection to the tractor.
- Take the fifth wheel coupling off the tractor unit and place it on a suitable base.

3.2 Removing cable ties

⚠️ Ensure that the cable sleeve is not damaged during the following step.

- Cut cable ties open at the indicated points.
- Cable tie (A) is secured with a washer.
3 Repair work

3.3 Removing the locking mechanism sensor

- Position of locking mechanism sensor (1).

- Remove the head from blind rivet (23) using 5.5 mm drill bit and undo the screw (24).
- Remove the trap (25) and the sensor with holder (22).

3.4 Creating a repair drill hole

- Drive the rivet (23) using a pin punch of diameter 3 mm into the drill hole.
- Open up the drill hole using a 4.2 mm drill bit.
- Deburr the hole.
- Cut the M5 thread.
3.5 Installing the locking mechanism sensor

Only use a new securing nut (28) for installation. Also note the "Repair instructions for the JSK 37 fifth wheel coupling".

- Fit the exchange locking sensor with a sensor holder (22) and trap (25) as shown adjacent.
- Tighten the securing nut (28) to hand tightness.

To secure the retaining plate, insert the M5 x 10 screw (29) included with the repair kit and tighten it to the specified torque.
- Tighten the hexagonal screw (24) to the specified torque.

3.6 Installing the guard plate

- Unscrew the mounting dome (1) by turning it anti-clockwise out of the threaded hole.
- Route the cable of the exchange locking mechanism sensor through under the handle (arrow).
- Attach the cable to the second mounting dome (30) using a cable tie.
3.7 Removing the connection plug

- Slide the safety slide (10) in the direction of the arrow (C) away from the plug.
- Pull the plug (11) towards the centre of the coupling plate (D) out of the retaining plate.
- Installation is carried out correspondingly in the reverse order.

3.8 Renewing the locking mechanism sensor

Ensure that the cable is not damaged during the following step!

- Cut open the cable tie (31) at the connector cap (32).
- Open the locking clips (33) of the connector cap (32) with a flat screwdriver and remove the connector cap.
Repair work

- Unlock the second contact lock of the connector.
- Insert a flat screwdriver into the hole provided in order to unlock the second contact lock. Light pressure moves the contact lock into the pre-detent position.

⚠ Never pull the line before unlocking the contact. Light pressure opposite to the cable lead-out direction facilitates unlocking.

- Push out contacts
  Pin 3 = black (ejector tool for Tyco flat connector 2.8)  
  Pin 4 = red (ejector tool for Tyco flat connector 1.6)  
  Pin 5 = brown (ejector tool for Tyco flat connector 1.6)
- To press out the contacts, push the blades of the unlocking or press-out tool into the two slots in the corresponding contact chamber up to the stop.
- Once the press-out tool has been inserted and the contact unlocked, it is possible to remove the contact on the line.
- Nip off the pushed-out contacts directly behind the seal using a cable cutter (A).
- Then pull the cable of the locking mechanism sensor out of the shrink-fit hose (B).

⚠ When inserting the contacts, make sure they are aligned correctly. The contacts must be heard engaging in the connector.

- Insert the contacts of the new locking mechanism sensor
  Pin 3 = black
  Pin 4 = red
  Pin 5 = brown
- Close the contact lock on the connector.
3.9 Assembly

◊ Cable routing, cable securing and connector installation are performed in the corresponding manner, but in reverse order.

⚠ Shrink-fit hose, cable sleeve and insulation of the strands can be damaged by the heat of the hot air blower.

- Shrink the shrink-fit hose around the remaining two lines using a hot air blower.
- Then secure the jacket cable of the new locking mechanism sensor (34) to the two other jacket cables using a cable tie (35).
- Put on the connector cap (32).
- Secure the cable to the connector cap (32) with another cable tie (31).