

SAE J560 Receptacle

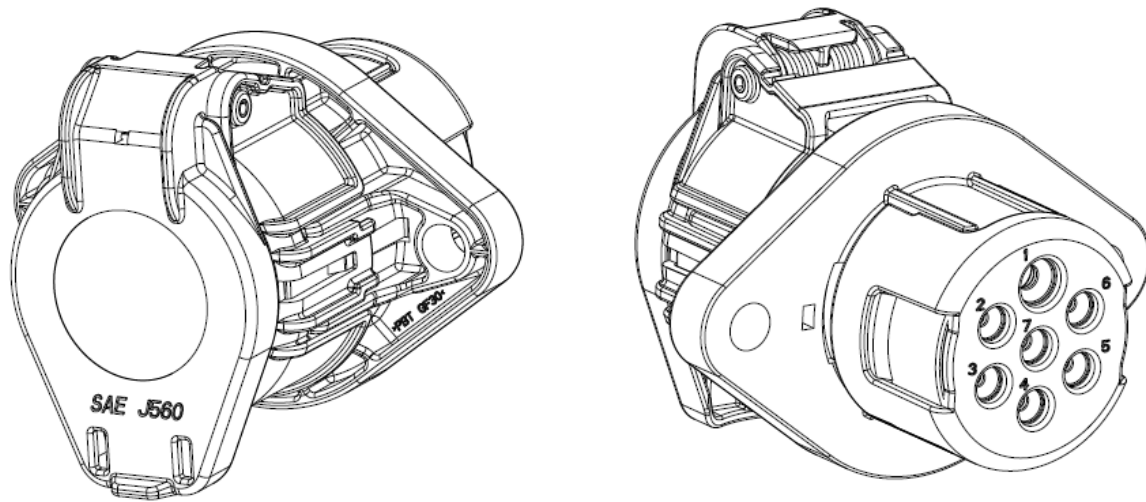


Figure 1

1. INTRODUCTION

This instruction sheet provides assembly (terminal insertion, mounting, and connector mating) and disassembly (connector un-mating, dismounting, and terminal extraction) procedures for SAE J560 Breakaway Receptacle connectors, shown in Figure 1. These connectors accept TE SAE J560 terminals, mate with all aftermarket plug connectors that conform to the SAE J560 standard, and mount to the SAE J560 standard panel cutout.

i NOTE
 These connectors mate with aftermarket SAE J560 plug connectors. For assembly and disassembly procedures for the plug connectors, refer to the manufacturer's instructions for that specific connector

i NOTE
 Dimensions in this instruction sheet are in metric units. Figures are not drawn to scale.

2. DESCRIPTION (See Figure 1)

Each connector consists of a fixed receptacle and a breakaway receptacle. The fixed receptacle mounts to a panel or bulkhead, and the breakaway receptacle nests and locks into the fixed receptacle.

The fixed receptacle consists of a housing, endcap, wire seal grommet, terminal retainer and a receptacle seal. The breakaway housing consists of a housing, spring loaded lid, spring and hinge pin. The spring-loaded lid acts as a protective cover when the connector is un-mated and acts to retain the plug when the connector is mated.

If the truck driver disconnects the trailer but not the electrical connector, and drives away, the breakaway receptacle will disconnect from the fixed receptacle at a pre-defined load to prevent damage to the truck or trailer.

3. ASSEMBLY PROCEDURE

3.1. Terminal Insertion

1. Make sure that the terminals are properly crimped. Refer to Application Specification 114-151067 for inspection requirements.
2. Insert the terminal into the appropriate cavity and push until it locks in place. To verify it is properly seated, pull slightly on the wire. The terminal/wire should not pull back out.

3.2. Mounting

1. Align the connector to the panel cutout and insert the rear of the connector through the central hole.
2. Insert the recommended fasteners through the mounting holes on each side of the connector. If nuts and/or lock-washers are required, apply them to each fastener.
3. Torque the fasteners to 4.5-5.5 N-m [40-49 in-lb].

3.3. Mating

1. Open the lid by lifting from the bottom until it stops and hold in position. Alternatively, for one-handed

operation, the front of the plug may be used to open the lid by placing beneath it and lifting.

2. Push the plug into the receptacle until the latch bump on the plug passes beyond the latching feature on the lid. See Figure 2. To verify it is properly mated, pull slightly on the plug in the direction of removal. It should not pull back out.

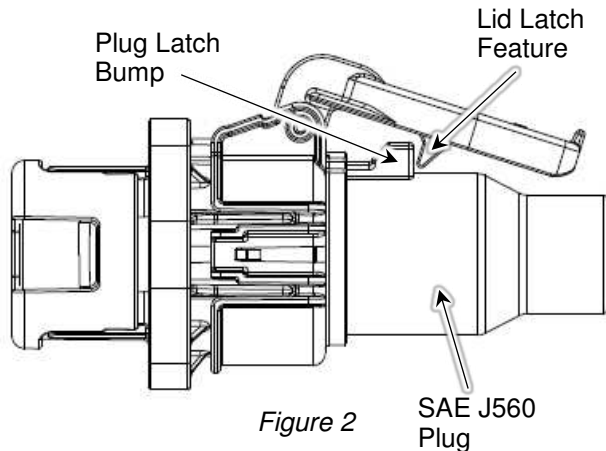


Figure 2

DISASSEMBLY PROCEDURE

4.1. Unmating

1. Lift the lid until it stops or the latch feature clears the latch bump on the plug.
2. Pull straight on the plug until it is clear from the receptacle.

4.2. Dismounting

1. Reverse the process described in 3.2.

4.3. Terminal Removal

1. Insert a small, flat blade screwdriver into one of the notches on the end cap. Gently pry the end cap away from the receptacle body until the cutout of the endcap rests on top of the latch bump on the receptacle body. See Figure 3.



CAUTION

Disconnect battery or make sure voltage is not present at the terminals before attempting to service the connector. Take care not to damage the terminals or plastic components.

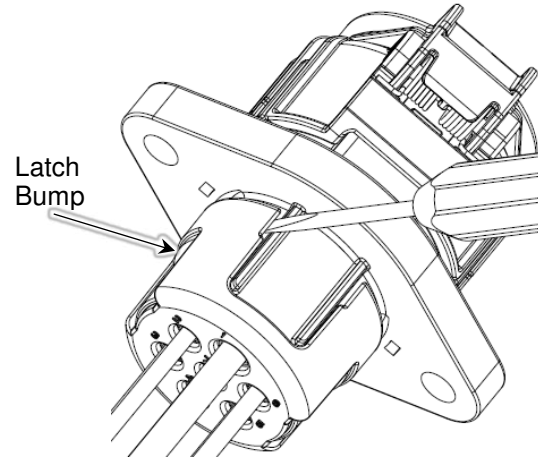


Figure 3

2. Repeat (1) for the other side of the end cap. Take care that the first side does not snap back in place.
3. Slide the end cap rearward to disengage fully from the latching features. Then pull the wire harness bundle to fully remove the wire seal grommet, retainer and crimped terminals all at once from the rear of the fixed receptacle.
4. To remove an individual terminal, insert a small flat blade screwdriver into the slot in the desired cavity of the terminal retainer. Twist the screwdriver to open the locking fingers, and at the same time pull the terminal rearward. It is also acceptable to push the terminal from the front. Remove the terminal fully from the retainer, grommet and end cap. See Figure 4.



CAUTION

Do not flex the locking fingers more than is required to remove the terminal. Doing so may damage the terminal retainer.

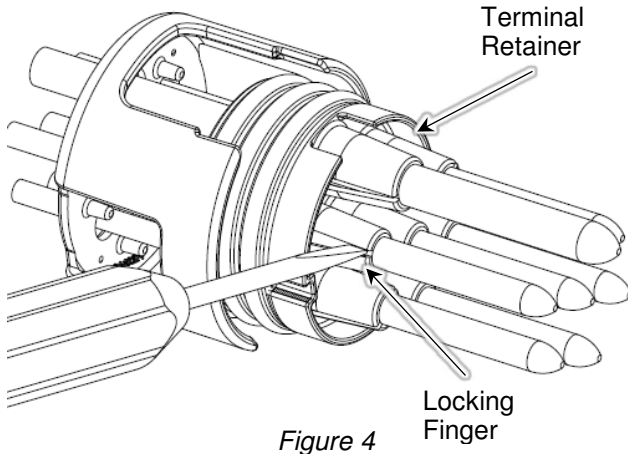


Figure 4

4.4. Breakaway Receptacle Removal

1. Insert a small, flat blade screwdriver into the notch between the breakaway latch and fixed receptacle housing. See Figure 5.
2. Gently pry the latch away while at the same time rock the breakaway receptacle to one side so the latch rests on top of the latch bump. Repeat the process for the other side, taking care that the first latch does not snap back in place.
3. With both latches resting on top of the fixed receptacle latch bumps, pull the breakaway receptacle straight out and away from the fixed receptacle.

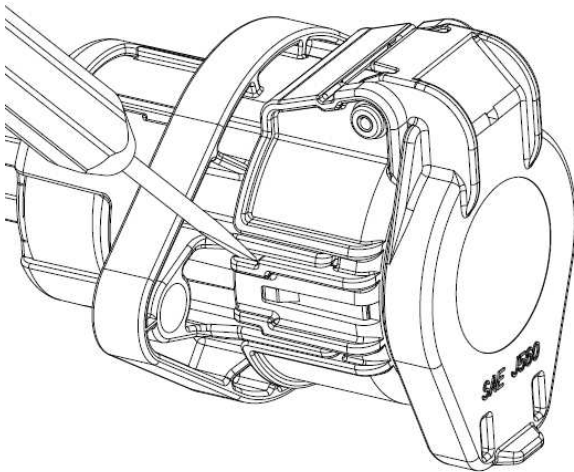


Figure 5

5. REPLACEMENT AND REPAIR

The connector and terminals are not repairable. DO NOT use any defective or damaged terminals, seals

or connectors. DO NOT re-use a terminated terminal by removing the wire.

5.1 Breakaway Receptacle Replacement

If a breakaway event occurs, and the breakaway receptacle is lost or damaged, it may be replaced. To replace a lost or damaged breakaway receptacle follow the below instructions:

1. Obtain a new receptacle from the dealer or aftermarket parts distributor.
2. Inspect the receptacle seal for damage. If it shows signs of damage (tears, cracks, distortion), follow the instructions in 5.2 below.
3. Insert a new breakaway receptacle into the fixed receptacle. There is only one orientation that will allow full insertion and locking in place.
4. Push the receptacles together until the latches snap in place. Ensure both latches are fully engaged before use. See Figure 6.

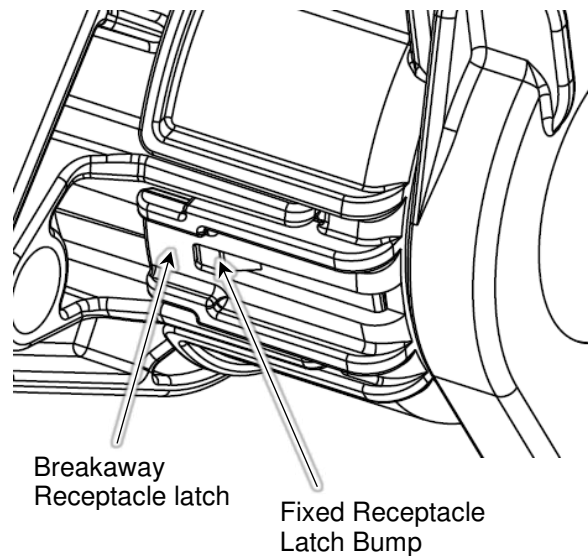


Figure 6

5.2 Receptacle Seal Replacement

1. Follow the process described in 4.4 above to remove the breakaway receptacle if necessary.



CAUTION

Disconnect battery or make sure voltage is not present at the terminals before attempting to service the connector. Take care not to damage the terminals or plastic housing.

2. Use a small, flat bladed screwdriver to pry the seal away at the top of the receptacle. See Figure 7.
3. Continue to pry the seal away until removed completely. Use pliers if necessary.
4. Replace with a new seal by inserting over the terminals. Take care to ensure the seal is correctly oriented with the rectangle shaped "key" positioned in the notch at the top of the receptacle.
5. Replace the Breakaway Receptacle as described in 5.1 Step 3 & 4 above.

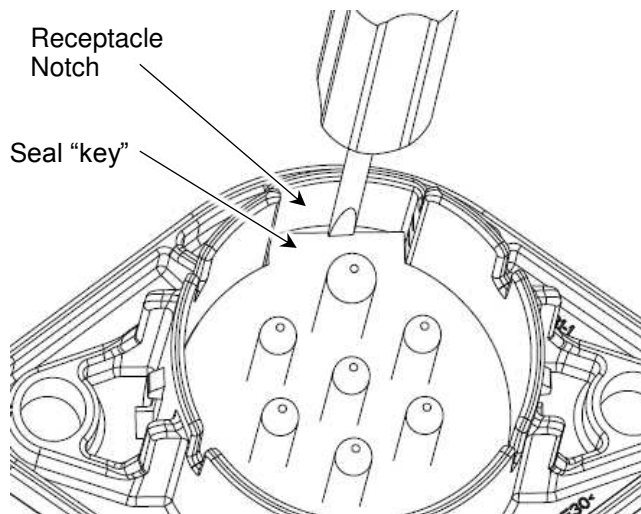


Figure 7

6. REVISION SUMMARY

Initial release of instruction sheet.