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ZF-TRONiC®

10 AS 2301

12 AS 2301, 16 AS 2601

Repair stages 1 - 2

1327 751 101

In case of doubt always turn to the relevant department within ZF After-Sales Services for advice.
All work on transmissions is to be performed expertly and under clean conditions.
Use specified tools to dismantle and assemble transmissions.

After removing the transmission from the vehicle, clean thoroughly with a suitable cleaning agent before opening.

Pay particular attention to the projections and recesses of housings and covers when cleaning.

Parts joined with Loctite are easier to separate if warmed with a fan heater.

CLEANING PARTS

Remove remains of old gaskets on all seal-faces.
Carefully remove burrs or similar patches of roughness using an oil-stone.

Lube bores and grooves must be free of anti-corrosion agents and foreign matter; check for perfect passage.

Carefully cover opened transmissions to prevent foreign matter from entering.

REUSING PARTS

Parts such as ball or roller bearings, multi-discs, thrust washers etc., must be inspected by a competent person, who should decide whether or not they can be re-used. Replace parts which are damaged or have suffered from excessive wear.

GASKETS, LOCKING PLATES

Parts which cannot be removed without being damaged must always be replaced with new parts (e.g. gaskets and locking plates).

SHAFT SEALS

Always change shaft seals with rough, ripped or hardened packing washers. Seal contact surfaces must be totally clean and in perfect condition.

REWORKING

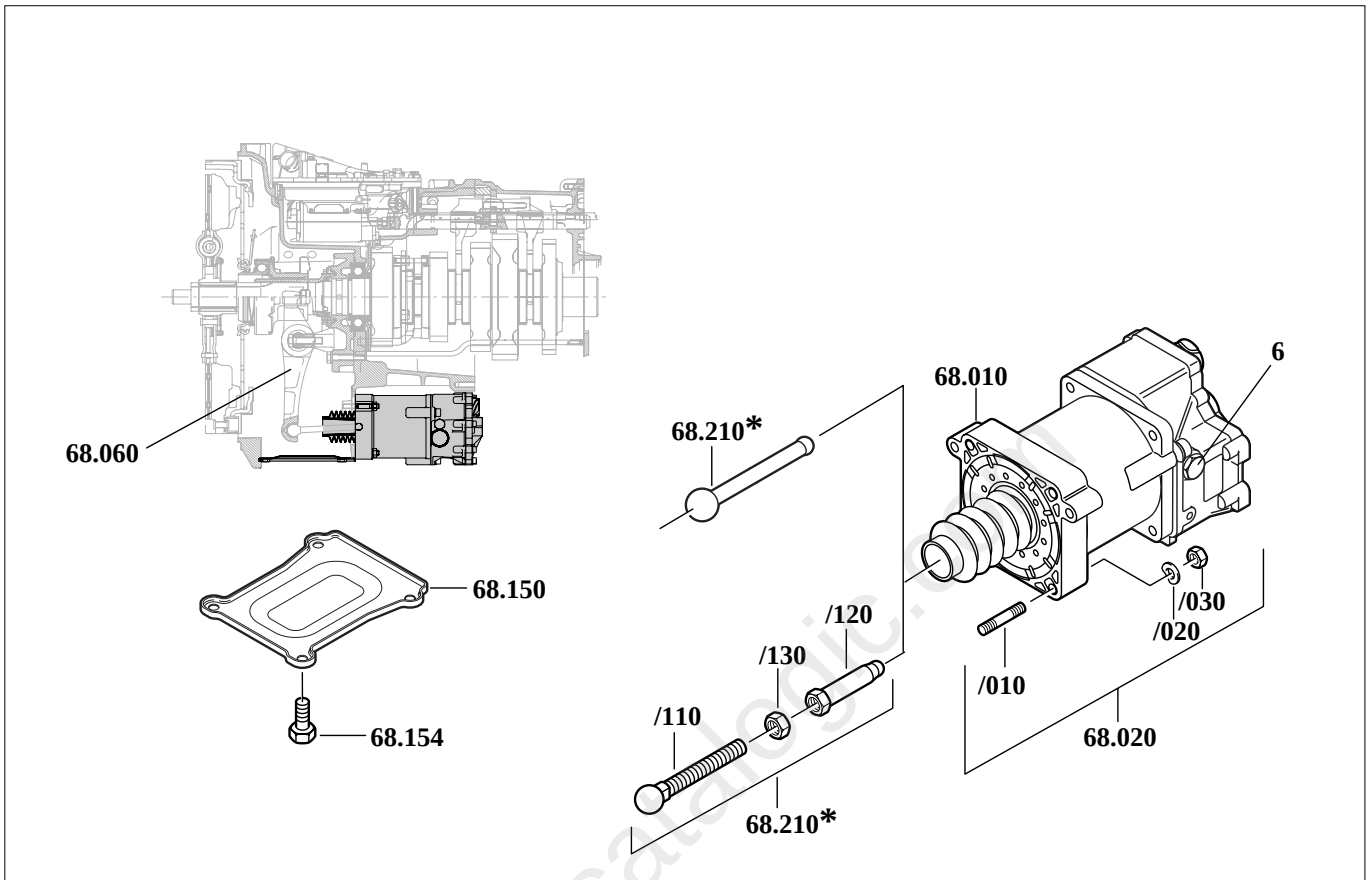
Rework may be carried out on seal contact surfaces using plunge-cut grinding only, never use an emery cloth. Ensure that there are no traces of grinding or riffling.

If rework is needed on distance washers, shims etc. because of clearance settings, ensure that the reworked areas contain no face runout and have the same surface quality.

TRANSMISSION ASSEMBLY

Find a clean site to assemble the transmission. Gaskets are installed without the use of sealing compound or grease. When measuring silicon-coated gaskets, take care **not to include the silicon layer in the measurement.**

During assembly, comply with all adjustment data, checking data and tightening torques in the Repair Manual.



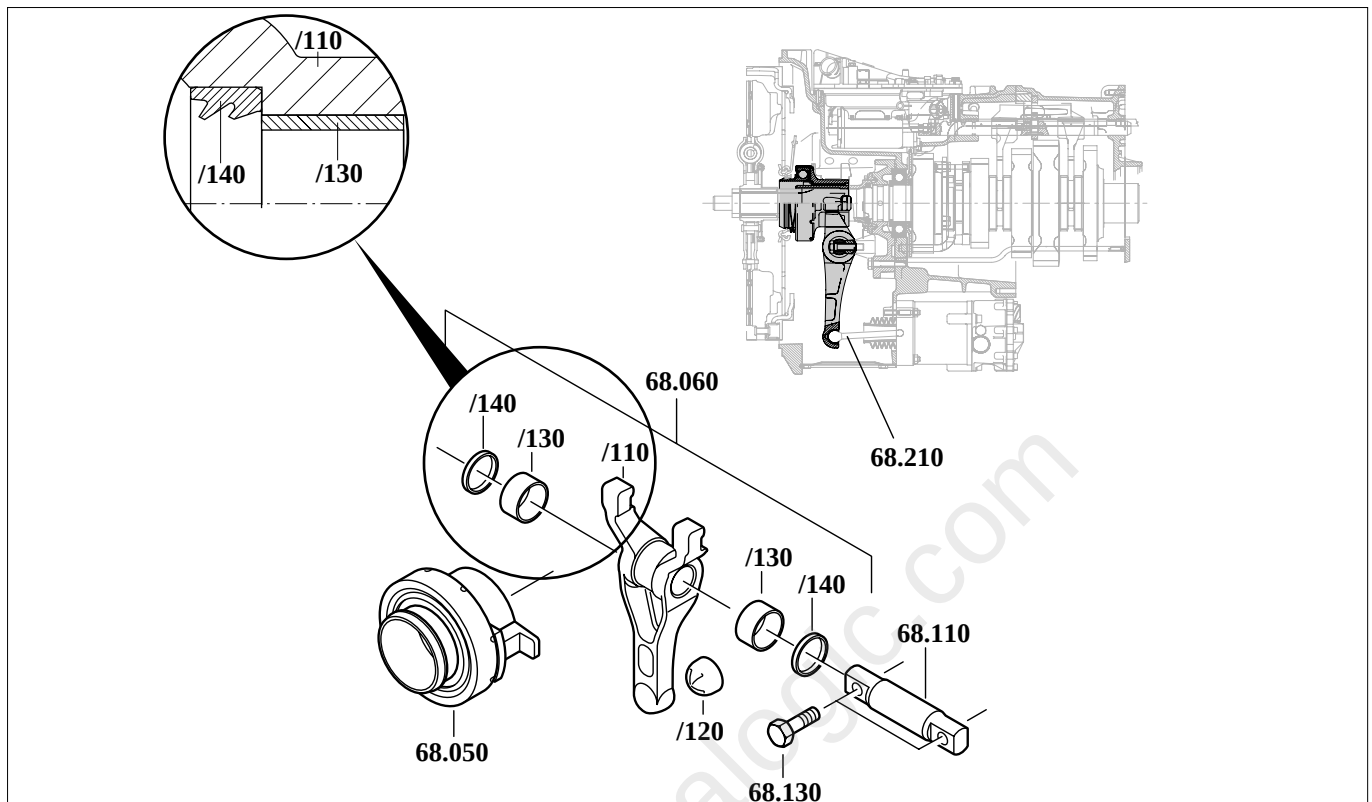
014 703

5.3 Fitting

- 1 Insert thrust rod (**68.210**) in pan of release fork (**68.060**).
Use 4 M8 hex nuts (**/030**) to secure clutch actuator (**68.010**) and 4 washers (**/020**).
In so doing, check that the connections are in the correct position and that the thrust rod (**68.210**) is seated correctly in the release fork and clutch actuator.
Tightening torque
Hex nut (**/030**) M8 = 23 Nm
Dowel pin (**/010**) M8 = 10 Nm
- 2 Use 4 M8 hex bolts (**68.154**) to secure cover (**68.150**).
M8 tightening torque = 23 Nm

Bleeding clutch actuator

Unfasten M12x1.5 bolt (**6**).
If the seal on the bolt is torn, replace the seal.
Retighten bolt (**6**) to 22 Nm.



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7 Clutch release device

7.1 Removal of release fork

- 1 Remove 2 M12 hex bolts (68.130) from release shaft (68.110).
- 2 Take release bearing (68.050) and release fork (68.060) off input shaft.
- 3 Slide release shaft (68.110) off release fork (68.060).
- 4 Dismantle release fork (68.060).
Use suitable tool to remove shaft seal (/140) and bush (/130). Replace ball cup (/120) if damaged or worn.

7.2 Fitting release fork

- 1 Assemble release fork (68.060).
An adapter 1X56 138 215 is required as support for the release fork. The other two adapters 1X56 138 215 are used to press the two bushes (/130) into the release fork (/110) until flush.

NOTE

The shaft seals on the outer edge are coated with spirits.

- 2 Use adapter 1X56 138 215 to drive both shaft seals (/140) fully home.
Grease sealing lip of shaft seal (/140) with OLISTA LONGTIME 3EP (ZF no. 0671 190 050).
- 3 Guide release shaft (68.110) into release fork (68.060) and take care not to damage the shaft seals.
- 4 Position release bearing (68.050) on release flange. **Do not grease sliding seat between release bearing and release flange.**
- 5 Grease locating faces between release fork (68.060) and release bearing (68.050) with OLISTA LONGTIME 3EP (ZF no. 0671 190 050). Mesh release fork (68.060) with release bearing (68.050).
Check that thrust rod (68.210) is seated correctly.
- 6 Use 2 M12 hex bolts (68.130) to secure release shaft (68.110) to housing I.
M12 tightening torque = 79 Nm

13 Changing the neutral switch***13.1 Removal**

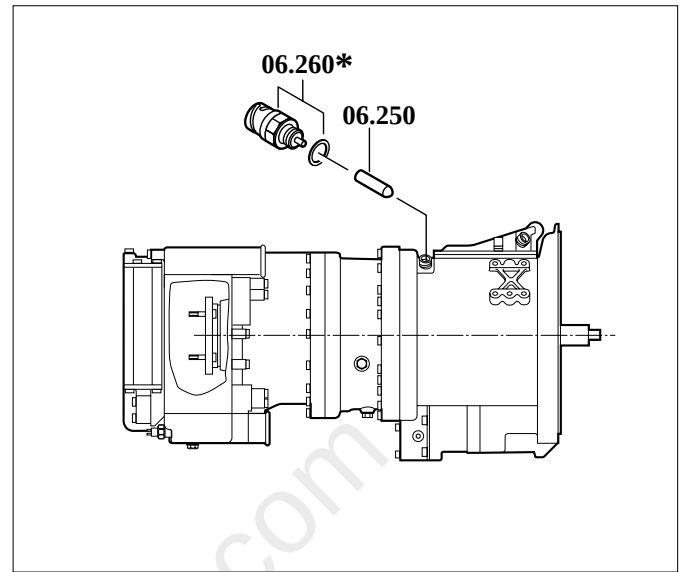
- 1 Remove neutral switch **(06.260)** and seal.

13.2 Fitting

- 1 Apply a little grease to plunger of neutral switch. Fit seal and screw down neutral switch **(06.260)**. Tightening torque = 50 Nm

NOTE

Pin **(06.250)** must be fitted.



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13.3 Changing the connector

If the connector has to be changed, please use the standard AMP tool.

For *wiring diagram*, refer to parts list.

Name

Neutral switch (DIN bayonet)

Seal

Pin

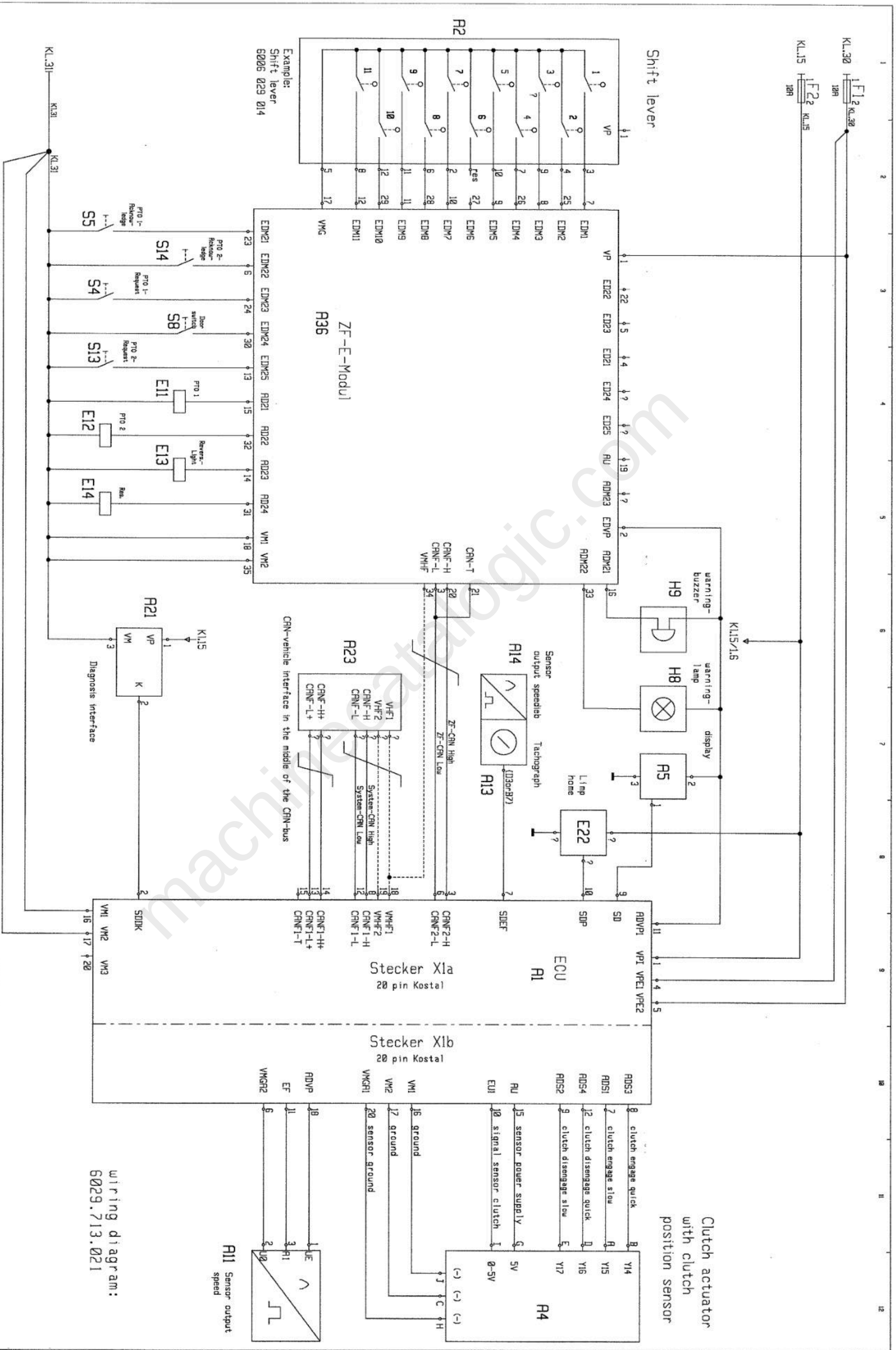
ZF no.

0501 210 059

0634 801 062

1328 306 024

* Option (refer to parts list)



wiring diagram:
6029.713.021

Full Version Available

ZF 10 AS 2301 Transmission Service Manual

ZF 10 AS 2301 transmission service manual with repair procedures, diagnosis and component work for 12 AS 2301 and 16 AS 2601. Instant PDF download.

VIEW THE FULL MANUAL

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