

- 2) Pressure relief limiter screws not set correctly. **Replace the limiter screws** (refer to the procedure that follows) on the steering gearbox when setting the alignment that could have change the mechanical end lock position of the vehicle or if the maintenance technician took the steering gearbox to a full lock position without having all the steering mechanical connections installed or linked.

A setting of the steering limitation is necessary if or when

- a) A new or repaired steering gearbox is fitted or
- b) New screws (20 and 128) were fitted to the automatically adjusting steering limitation or
- c) Alterations to or adjustments of the front axle were carried out.

PROCEDURE



DANGER

Park vehicle safely, apply parking brake, stop engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position.

Lock out & Tag out (LOTO) must be performed during set-up, maintenance or repair activities. Refer to your local procedure for detailed information regarding the control of hazardous energy.

NOTE

After a steering gearbox is installed in a vehicle, the steering is turned to its limits and these limiters will crush or shorten to set that limit. After a gearbox has been in service, these limiters will always be crushed to some degree and sometimes not equally depending on the vehicle alignment.

The hydraulic steering limitation causes the pressure to drop in the area of the steering lock stop, thus protecting the steering pump and the steering linkage and preventing increased temperatures.

1 REPLACING THE LIMITER SCREWS (ITEM 128 & 20)

NOTE

The repair may only be carried out with the steering gearbox removed from the vehicle.

1.1 Disassembly



CAUTION

To ensure a safe functioning of the steering gearbox, absolute cleanliness is necessary during disassembly and storage of the parts. By no means, use any force during disassembly as this might cause damages to sealing ring seats, sealing surfaces, etc... which, in turn, can entail a partial or complete failure of the steering gear.

1. Rotate the steering wheel to the straight ahead driving position.
2. Unscrew and remove the screws (item 128 & 20, FIGURE 1).

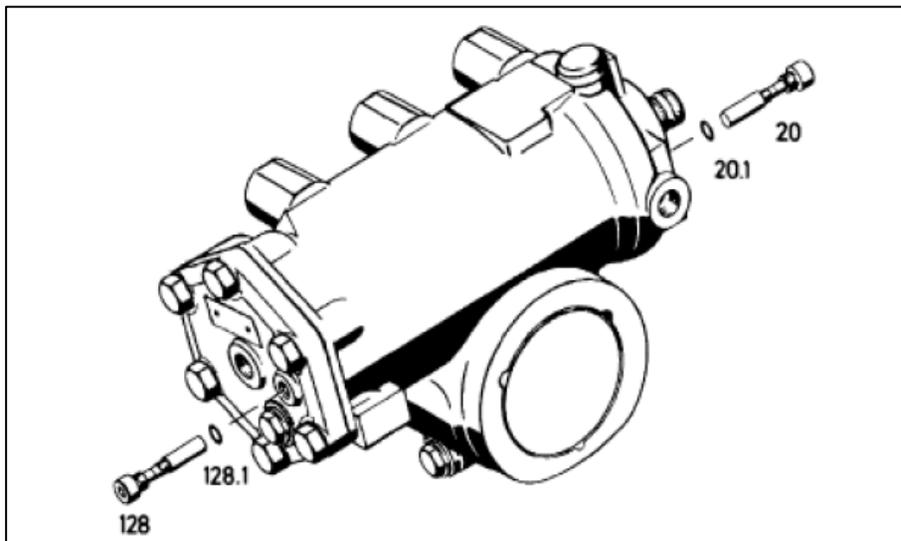


FIGURE 1 : SCREW 128 & 20 - REFER TO RB ROBERT BOSCH SERVOCOM - SERVICE MANUAL (8090)
FOR VARIANTS IF APPLICABLE

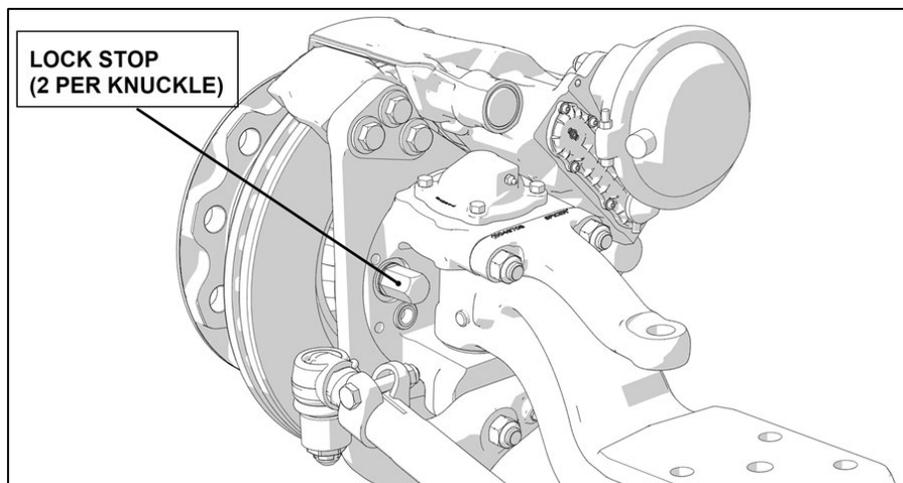


FIGURE 2 : FRONT AXLE STEERING KNUCKLE

1.2 Assembly

NOTE

Prior to assembling the steering gear, thoroughly clean all components. Each component must be checked for wear or other defects and oiled before being re-assembled.

As a rule, replace all seals, shaft seals and O-rings by new ones and abrade the front faces of housings and covers to remove paint rests and damages.

The measuring and adjusting tools used during repair must be subjected to a precision check at regular intervals.

The tightening torques specified apply to a tightening operation using a torque wrench and manual force.

1. Rotate the steering wheels to the straight ahead driving position.
2. Grease the O-ring (item 128.1 & 20.1, FIGURE 1).
3. Screw in new screws (item 128 & 20, FIGURE 1) (tightening torque: 12+3 Nm / 9+2 lbs-ft).

NOTE

When the steering box is without its steering linkage or when it is removed from the vehicle, do not rotate it to its end position anymore; otherwise, it will not be possible any longer to adjust the steering limitation in accordance with specification.

2 ADJUSTING THE STEERING LIMITATION

NOTE

This adjustment can be carried out following the reinstallation of the steering gearbox to the vehicle, only. To enable the adjustment, the steering linkage and the steering knuckle lock stops (FIGURE 2) must already be fitted and adjusted.

1. Relieve the front axle by jacking it up (there must, however, remain a load on the front axle) or put it on swivel plates.
2. With or without power assistance, rotate the steering wheel until the lock stop is reached. The piston is thereby caused to push the sliding sleeve on the screw (20 and 128) to the required cut-off position.

NOTE

During this adjusting operation the steering limitation valve will be permanently open, which means that, with or without power assistance, an increased effort at the steering wheel will be required to turn the wheel further.

3. Repeat the adjusting operation for the opposite direction of rotation.

PARTS / WASTE DISPOSAL

Discard according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)

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