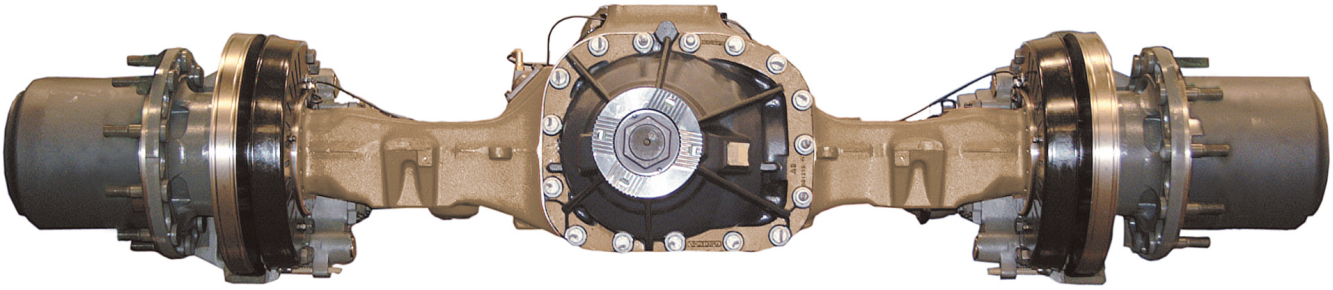
FACT SHEET

REAR AXLE

RSH1370F Rear hub reduction solo axle



RSH1370F is a solo axle with hub reduction, dimensioned for an engine torque of 3550 Nm. The maximum axle loading is 13 tons and the combination weight is 70 tons.

RSH1370F is designed to be used for heavy transports on demanding and hilly roads. The axle casing is cast in nodular iron, giving a compact design with high ground clearance.

In a rear axle with hub reduction there are two stages of reduction gearing. This means that the load is divided up so that the loading on the drive shafts and the centre gearing is low. This gives high reliability even at extremely high-power outputs and high speeds.

The centre gearing is of the spiral bevel type. This simple, reliable design is used mainly in rear axles where the major part of the reduction gearing takes place in the hub gears and only a small portion in the centre gears. The diameter difference between the pinion and the crown wheel is small. This results in a service-friendly centre gear with low drive losses.

Most of the torque conversion takes place in the reduction gears in the wheel hubs. This is a reliable design which takes the form of a cylindrical planetary gear with straight-cut gears on needle bearings, giving low drive losses.

RSH1370F is fitted with a differential lock to give increased grip on slippery surfaces. The diff lock is in the form of a hardened steel dog clutch which connects the free drive shaft to the differential housing. The diff lock is controlled simply and securely with a switch on the instrument panel. This contributes to increased driver comfort and efficiency.

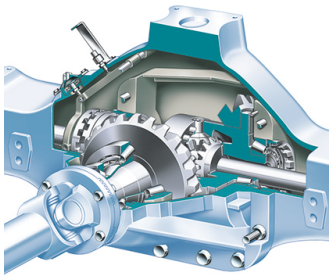
A combination of new production methods and special oil has resulted in longer oil change intervals. This means lower operating costs and reduced environmental impact. With an approved synthetic oil, an oil change is needed after at most 450 000 km or every three years.

UPTIME

- Reliable diff lock gives high vehicle availability.

ENVIRONMENT

- Wheel bearings in the form of maintenance-free unit bearings give longer life and easier servicing.



PC24 | PCA4

FACT SHEET

REAR AXLE

RSH1370F Rear hub reduction solo axle

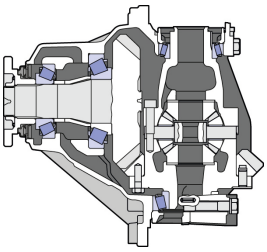
All components dimensioned for long service life

The rear axle housing is cast in nodular iron. The brackets and spring plates are integrated directly in the housing, resulting in a more compact construction.

The torque is transferred in the final drive via the pinion to the crown wheel which is fitted in the differential housing with a sturdy screw joint.

Both the crown wheel and pinion are made of special steel which is case-hardened to provide an extra-hard and durable surface, at the same time as the core itself is tough yet elastic so as to be able to absorb shock loads.

The pinion is journalled directly in the final drive housing with two sturdy conical roller bearings which are placed at either end of the pinion shaft. The differential housing with the crown wheel is journalled with two conical roller bearings, one on either side of the differential.



Hub reduction with high reliability and low drive losses

RSH1370F is fitted with reduction gears in each hub. The hub reduction gearing consists of a cylindrical planetary gear with straight-cut gears on needle bearings, giving low drive losses.

The sun wheel is mounted on the drive shaft. From the sun wheel, the power is transferred to four planetary gears connected to the wheel hub. When the planetary gears are forced to rotate against the ring gear, which is rigidly fixed to the rear axle casing, the rotation speed is geared down.

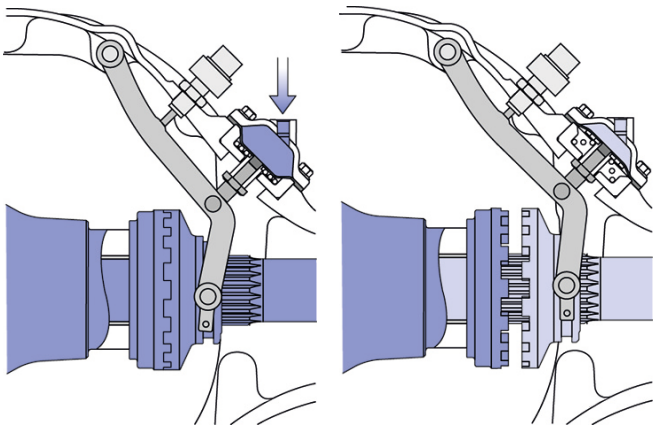
The wheel bearings are in the form of maintenance-free unit bearings. The entire hub with bearings can be removed and installed simply and safely without affecting the bearing clearance.

Reliable differential lock gives high availability

The diff lock gives excellent grip on slippery surfaces. It is sturdily dimensioned to withstand the highest stresses.

The diff lock is in the form of a hardened steel dog clutch which connects on of the drive shafts to the differential housing.

The diff lock can be easily engaged from the driver's position. This is done with a switch on the instrument panel which controls a solenoid valve, supplying compressed air to an operating cylinder in the rear axle. A lamp lights up on the instrument panel to indicate that the diff lock is engaged. The lamp only lights up when the diff lock is engaged, because the sensor which controls the lamp is operated directly and mechanically by the motion of the engagement arm.



Differential lock engaged. **Differential lock disengaged.**

VOLVO

FACT SHEET

REAR AXLE

RSH1370F Rear hub reduction solo axle

SPECIFICATION

Type designation.....RSH1370F
Gear.....Single gear, spiral bevel with hub reduction
Hub reduction..... Cylindrical planetary gear
Weight including driveshafts, hubs and drum brakes.....745kg
Weight including driveshafts, hubs and disc brakes.....735kg
Crown wheel, diameter.....295mm
Driveshafts, diameter.....45mm
Maximum engine torque.....3550Nm
Max axle loading.....13000kg
Max combination weight.....70000kg

Ratio with hub reduction FE/FH/FM

.....3.46:1
.....3.61:1
.....3.76:1
.....4.12:1
.....4.55:1

Ratio with hub reduction FH/FM

.....5.41:1

Ratio with hub reduction FE

.....4.67:1
.....5.46:1
.....6.18:1
.....7.21:1

Oil change quantity:

Air suspension.....23l
Leaf suspension.....24l