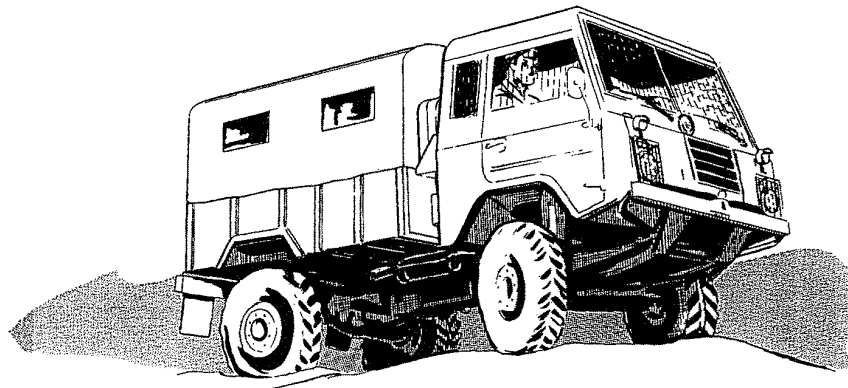


# OPERATING INSTRUCTIONS



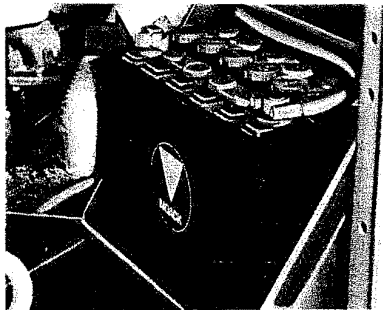
## Starting the engine

- 1 Make sure that the parking brake is on and that the gear lever is in neutral.
- 2 If the engine is cold, pull out the choke fully. Do not touch the accelerator pedal. If the engine is warm, depress the accelerator pedal about half way.
- 3 Depress the clutch pedal fully.
- 4 Switch on the ignition by turning the key.
- 5 Push in the starter button. Release the button as soon as the engine has started. If the engine is warm and does not start immediately, depress the accelerator pedal to the floor and keep it there until the engine starts.
- 6 If the choke has been used, push it in gradually to get the best idling. And as the engine becomes warmer, push it in more and more. The choke should be pushed in fully when the engine is completely warm.
- 7 Check that the oil pressure warning light is out. Do not race the engine. Never load the engine until it is warm. During the cold part of the year, treat the engine and gearbox with the greatest care, particularly when starting.

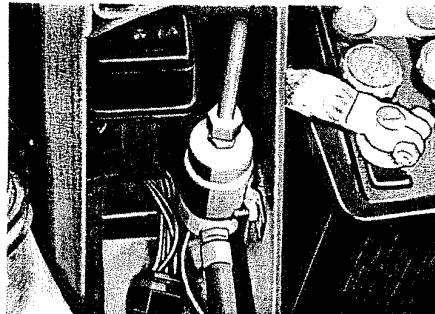
## Changing the battery

When changing the battery or when doing any other work with the electrical system, the following must be observed:

- **Make sure that the battery is connected with the correct polarity.**  
If the battery is incorrectly wired, this will ruin the alternator safety diode when the current is switched on.
- **The charging circuit must not be broken while the engine is running.**  
The charging circuit goes from B+ on the alternator to the battery and from the other pole on the battery via one or two chassis connections to the engine. If this circuit is broken at any point while the alternator is charging, this will damage the alternator rectifier.
- **Rapid charging and starting aid.**  
Always remember the polarity.  
For rapid charging, you must disconnect one of the battery cable terminals. The vehicle's battery **must be** connected up when using another battery as an aid in starting.
- **For reasons of safety, the following must be observed when doing any electrical welding work on the vehicle:**  
First disconnect the battery negative cable.  
Separate the connection adapter on the charging regulator.



Battery negative cable



Connection adapter on the charging regulator

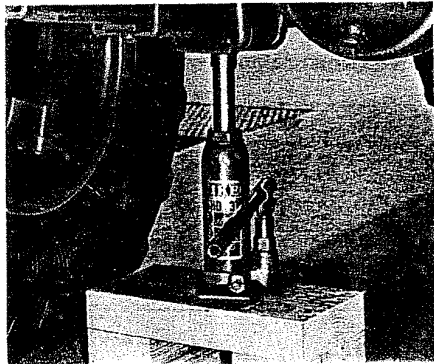
## Changing a wheel

When about to change a front wheel, place the jack and wooden trestle under the spring assembly next to the wheel that is to be changed.

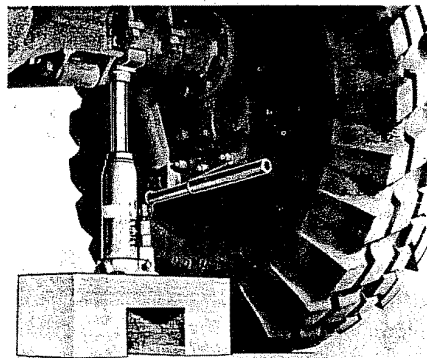
When about to change a rear wheel, place the jack and wooden trestle under the rear axle and as near as possible to the wheel that is being changed.

Change a wheel as follows:

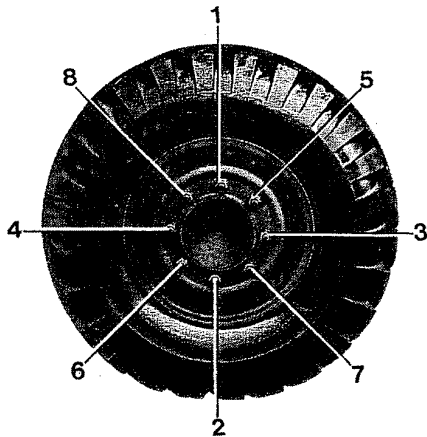
First slacken the wheel nuts, then jack up the vehicle so that the wheel is off the ground. Remove the wheel nuts and lift off the wheel. Clean thoroughly the contact surfaces on the new wheel and wheel nuts.



Changing a front wheel



Changing a rear wheel



Tightening sequence for wheel nuts

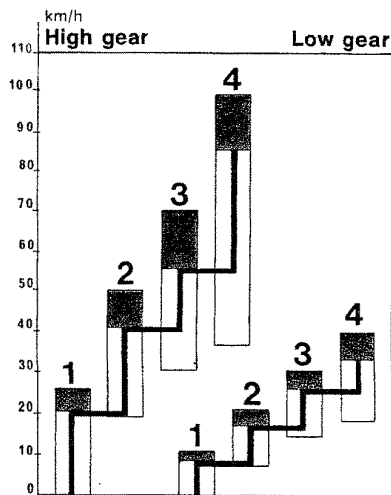
Lift on the new wheel. Screw on the wheel nuts. Lower the vehicle and tighten the wheel nuts diametrically to a torque of 21 Nm. (2.1 kpm = 15 lbfft).

# Driving

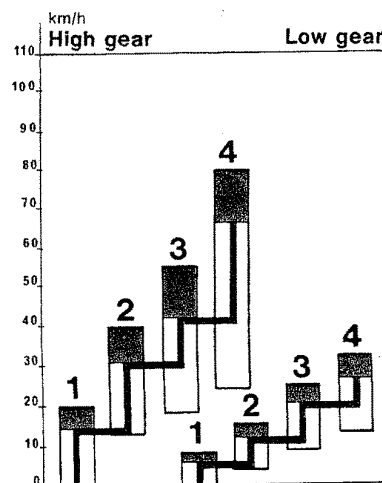
## GEAR-CHANGING

Under normal conditions, the vehicle should be driven in the high-gear range and only with rear-wheel drive. Four-wheel drive, i.e. drive is on both rearwheels, is to be utilized only when driving on the rear wheels is inadequate to cope with a particular situation. The low-gear range is used for driving under severe conditions, e.g., cross-country driving. Four-wheel drive engages automatically when the low-gear range is engaged.

To get the best possible performance out of the engine, it is important to remember that the gear-changing should be adapted to enable the engine speed to be kept within certain limits. In other words, the engine speed should be neither too high nor too low when changing a gear. The gear-changing diagram indicates the speeds permitted for the various gears.



Gear-changing diagram, C 303



Gear-changing diagram, C 304 and C 306

**The gearbox** is four-speed and fully synchronized.

The low and the high gear ranges are engaged in the **auxiliary gearbox**. But the gear lever operates both gearbox and auxiliary gearbox. Gear-changing between the high and low gear range should be done at a very low speed or even with the vehicle standing still. Gear-changing is carried out in the usual way by depressing the clutch pedal and releasing the accelerator pedal. The gear lever is first moved to position L and then either to 1, 2, 3 or 4, depending on which is most suitable for the speed of the vehicle at that particular time.

Changing from the low-gear to the high-gear range is in reverse order, i.e., the gear lever is first moved from the gear it is in to position H and then to the gear which suits the speed of the vehicle at that particular time.

The auxiliary gearbox is synchronized. So the best way to change from the high-gear to the low-gear range and vice-versa is to quietly force the gear lever in the desired direction until the desired gear is engaged. Gear-changing to the low-gear range must not take place at speeds higher than 40 km/h (25 mile/h).

## **BRAKING**

### **Service brakes**

It can happen in damp weather that the brake bands become moist and cause the brakes to grab when applied. This can be eliminated if you lightly depress the brake pedal now and again in order to heat the brake bands and dry them out. After driving the vehicle in water or after washing it, test the brakes as mentioned in the previous paragraph in order to make sure that they are functioning properly.

If one of the brake circuits should fail, you must use twice the normal foot pressure on the brake pedal in order to get about 80% of the normal braking effect you get from both circuits. About 50% is achieved with normal foot pressure on the brake pedal.

When the vehicle's brake power-assistance is not functioning, e.g., when the vehicle is rolling or being towed with the engine switched off, or if one of the servo units should stop functioning, about 4 times more pedal force is required in order to get the same braking effect you get with brake power-assistance.

Concerning the warning light for the parking brake, see page 17.

## **ENGAGING FRONT-WHEEL DRIVE WHEN DRIVING IN HIGH-GEAR RANGE**

To engage the front-wheel drive, push in the button marked "front-wheel drive". An indicator light goes on.

**NOTE!** Drive so that the front and rear wheels do not rotate at different speeds at the moment you engage the front-wheel drive.

## **ENGAGING AND DISENGAGING THE DIFFERENTIAL CARRIERS**

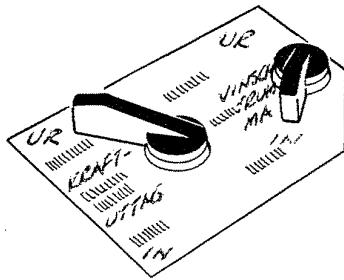
The differential carriers may only be used when driving on a slippery surface. They are engaged when the vehicle is running.

**NOTE!** The differential carriers must not be engaged when any of the drive wheels is spinning.

## **TOWING**

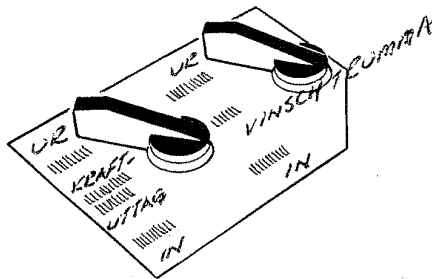
For towing use the towing line or towing bar which is connected to the vehicle towing hitch at the front or hook at the rear.

## ENGAGING AND DISENGAGING THE WINCH AND POWER TAKE-OFF



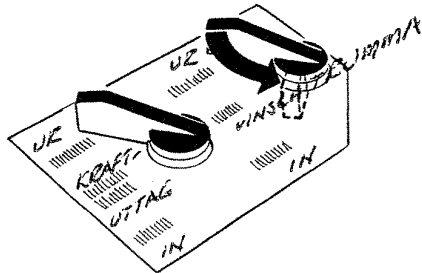
Make sure that the power take-off is always disengaged when not using the winch.

Control for operating winch and power take-off



- 1 To operate the winch, first disengage the winch drum. A sufficient length of the winch cable should then be pulled out by hand. If the winch is to be used for pulling a heavy load, it is worthwhile remembering that it has its greatest pulling power when only 3–4 cable turns are left on the drum.  
**NOTE!** When the beginning of the red mark on the cable is seen from the driver's seat (approx. 2–3 metres in front of the bumper), the cable must not be pulled out further.

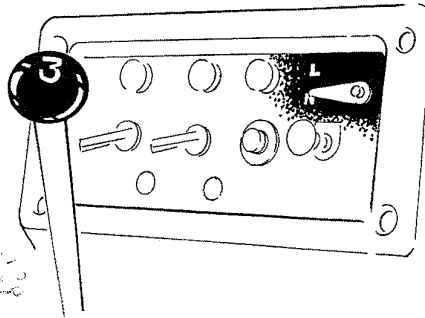
Disengaging the winch drum



- 2 Start the engine and engage the winch drum.

Engaging the winch drum

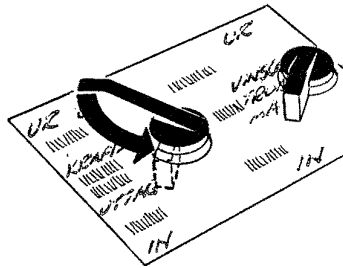
- 3 Move the gear lever so that the auxiliary gearbox is in neutral and then engage a suitable gear with the lever.  
For normal cable operation, 2nd or 3rd gear is to be recommended, otherwise the speed should be varied according to the winch operation involved.



*... Revvill an det  
bäst att börja vincha,  
för man eller 3:an de  
man står fast i ny  
eller i en vänt backe  
det är bättre än hast,  
är för ...*

Auxiliary gearbox in neutral

- 4 Depress the clutch pedal and engage the power take-off.
- 5 Rev up the engine and carefully release the clutch pedal.  
When maximum pulling power has been obtained, the slip coupling releases and the cable stops. Winch operation should immediately be discontinued (declutch).  
After winch operation has been completed, the cable should be wound in on the drum under a light load. This load must be applied otherwise the cable will wind poorly on the drum — but the cable must not be excessively loaded otherwise it could be damaged.



Engaging the power take-off