Quicker changing down from third gear to second gear and from second gear to first can be obtained by pressing down the accelerator pedal to the "kick-down" position.

In the same way, changing up between first gear and second, and second gear and third can be delayed.

If the car has become stuck in snow, loose sand or similar, it can be "rocked" loose by moving the selector alternately between the "D" and "R" positions under continuous light accelerator pressure.

For emergency starting the car is towed with the selector in the "N" position and the choke control pulled out slightly with the ignition switched on.

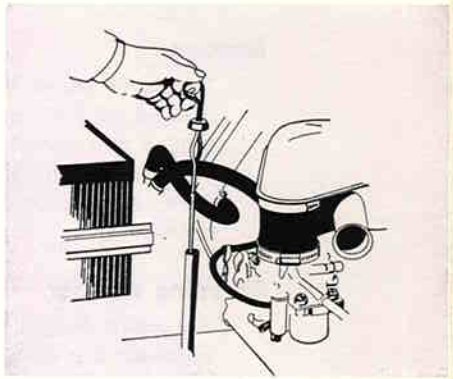
The selector is moved to "L" and the engine pulled round until it starts.

1. Do not select "P" or "R" positions when the car is moving
2. Do not select "D", "L" or "R" at a higher engine speed than idling when the car is stationary
3. Do not select "L" position at speeds above 90 km. p.h. (55 m.p.h.)

MAINTENANCE

Checking the oil level

The oil need not be changed, but the oil level should be checked every 5 000 km (3 000 miles). The filling pipe with a graduated dipstick is located under the bonnet immediately in front of the scuttle. When checking the oil, the car should be standing level and the transmission should be at normal operating temperature. With the engine idling and with the selector in position "P", the level should be between the upper and lower marks on the dipstick. When topping-up is necessary, use only Type A Suffix A Automatic Transmission Fluid.



The dipstick should only be wiped with a nylon cloth, paper or chamois leather. Rags or waste which can leave fluff on the dipstick must not be used.

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SUPPLEMENT TO INSTRUCTION BOOK
VOLVO 121/122 S

AUTOMATIC TRANSMISSION

DESCRIPTION

One of the Volvo P 120 models is equipped with a fully automatic transmission. It gives smooth running with well-adapted up and down changes, resulting in minimum wear to the engine and transmission system.

The automatic transmission consists in principal of two main components — a hydraulic torque converter and a hydraulically operated planetary gearbox with control system.

The converter acts both as a clutch and as an extra gear between the engine and gearbox. By this means smooth transmission of engine output to the driving wheels is obtained as well as an extra torque reduction.

The planetary gearbox is controlled hydraulically and selects a suitable gear in relation to the speed of the car and the position of the accelerator pedal. There is also a selector control with the following positions:

P = Parking position N = Neutral position L = Low gear position
R = Reverse position D = Driving position

DRIVING

General

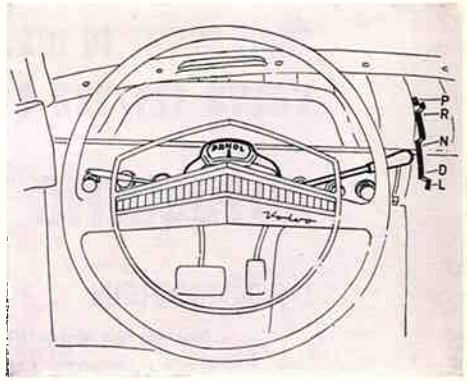
When driving your Volvo with the automatic transmission system you will immediately become aware of how you can obtain smooth driving without any conscious effort. Thus a large part of the work involved in driving a car is eliminated so you will be able to pay more attention to what is happening on the road and thereby make for safer driving.

Starting the engine

The engine should be started with the selector in position "P" or "N". As a purely safety-measure the starter switch is automatically disconnected

if the selector is moved to any of the other positions. In order to avoid stalling the engine when starting from cold, the choke control should be pulled out so that the idling speed is slightly higher than normal. As the engine warms up, the choke control should be pushed in gradually.

Selecting



The selector can be moved freely between positions "N" and "D". The other positions, i.e. "P", "R" and "L" are provided with catches. In order to move the selector to any of these positions it must first be lifted towards the steering wheel before it will engage in the desired position. When the car is stationary and the selector is to be moved to "R", "D" or "L", always remove the foot from the accelerator pedal and apply the footbrake or handbrake, otherwise the car will begin to "creep". When the selector is moved from "N" to "R", "D" or "L", a pronounced engagement thump can be heard at high idling speed (for example, when the choke control is used). This is not detrimental to the car or transmission system.

D-position

Under normal driving conditions use your car at all times with the selection "D" — fully automatic drive. The transmission then starts in first gear and automatic upchanges to second and third gear occur in accordance with road speed and accelerator positions. Automatic downchanges from third to second and first occur with decreasing vehicle speed.

L-position

Normally no advantage is gained by selecting "L" (lock-up) for moving off or low-speed driving because the available ratios (first and second) are the same as those for "D" position. If, on the other hand, the speed is higher and third gear is engaged, an immediate downchange to second gear will take place if the selector is moved to "L". No upchanging takes place as long as "L" is used, although the transmission will automatically downchange to first gear and remain locked in this ratio while the selector remains at "L".

The main uses of the "L" position are as follows:

1. To obtain immediate changing-down manually.
2. To obtain powerful engine braking effect — for example, on long, downhill runs.
3. In order to obtain a higher engine speed when, for example, the battery requires charging.

Never move the selector to the L-position if the speed exceeds 90 km.p.h. (55 m.p.h.) as there will be risk of over-revving the engine.

N-position

The neutral position has the same function as on a manual gearbox, i.e. no gear is engaged. This position can be used when starting the engine and when parking with the handbrake applied.

R-position

This position is used when reversing. Note the advantages offered by "creeping" (driving with no throttle) when manoeuvring in restricted parking spaces.

P-position

When parking with the engine switched on or off, position "P" should be selected. On a steep gradient the handbrake should also be applied.

Starting

The car is started by moving the selector to the desired position and releasing the brake pedal. The car then moves off gently ("creeps"). The speed is then controlled with the accelerator pedal. If the quickest possible acceleration is required, the accelerator pedal in pressed down to the "kick-down" position, i.e. past the "hard-spot" in the lower accelerator pedal position.

Stopping the car

The car is stopped by releasing the accelerator pedal and applying the footbrake. It is not necessary to move the selector.

Driving under different conditions

Manual driving to a limited extent can also be done with the automatic transmission. In this case starting is done with the selector in position "L". Changing up to second gear is done by moving the selector to "D" and quickly back to "L". Third gear is obtained by moving the selector to position "D".