

Report No. 69

The diesel engined Land Rover

Origin The Forestry Commission being large users of Land Rovers the opportunity was taken to test one of the new diesel models offered on loan by the Rover Company.

Description Some details of the vehicle sent for trial are as follows (the equivalent figures for the petrol model are shown in brackets alongside):-

Wheelbase ...	38 inches	(38 ins)
B.H.P. ...	52 at 3500 R.P.M.	(52 at 4000 R.P.M.)
Cylinders ...	Wet Cast iron liners	(Monobloc)
Engine Capacity	2052 c.c.	(1997 c.c.)
Retail price	£730	(£630)

Conditions of the trial Running was completed 96 ^{Mileage on hours?} on roads and 14 across country. The latter included the worst road conditions (wet clay at Alice Holt) that are likely to be met in normal forest use. A number of different drivers handled the machine during a period of 3 weeks. The petrol vehicle used as a basis of comparison was over two years old but was in good condition.

- Observations
1. When compared with the petrol machine the most noticeable difference is the familiar diesel "knock" experienced to some extent on all diesel engines. This, however, disappears above 2,000 engine R.P.M.
 2. Experienced Land Rover drivers commented on the improved steering and suspension. It should be noted that on the latest petrol models steering and suspension are the same as on the diesel model. The 6.50 x 16 tyres compared with 600 x 16 tyres on the petrol model are also probably responsible for the comments on the improved ride.
 3. Acceleration, speed and general "liveliness" are regarded as rather below the standard of the petrol model.
 4. Fuel consumption worked out at 26 M.P.G. over the full trial of 1460 miles. A comparative figure for the petrol model taken over the same kind of running is 19 M.P.G. At a London bulk wholesale price of 3/9³d for commercial petrol and 3/10d. for diesel fuel this represents a saving of £2.14s. 0d. per 1000 miles run.

5. Although endurance and ease of maintenance could not be assessed in the short time available it is reasonable to expect that the engine would give a longer life than the petrol model. No mechanical defects occurred during the trial. No difficulties were found in carrying out the normal maintenance routine.

Conclusions The diesel Land Rover proved itself to be very suitable for forest use. The fuel cost saving compared with the petrol model given at Observation 4 shows that in a normal year's running of 14,000 miles the saving on fuel cost would be over £37. Hence the extra capital cost would be written off in under 3 years.

R. G. SHAW.

Machinery Research Officer
December, 1957.

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*In view of φ φ, I think we
ought well get some of this model as
occasional units.*

[Signature]
13¹²/₅₇

*As this is a new engine design
by Rover and the first they have produced
it is reasonable to suppose that, in common
with other ventures of this kind, there will be
teething troubles. I would advise waiting
a year before we acquire any. MRS. 23/1/57.*

Col. Richardson:

Col. Packwood:

There is none.

*Please ascertain from H.Q.
how many the Commission (as a whole)
has, & where they are. We might
then keep in touch with other
directorate.*

MRS. 3/1/58

[Signature] 3/1/58