REDUCING THE GAS CONSUMPTION THROUGH
THE PROPER USE OF THE ENGINE REVOLUTION
AND OF ENGINE POWER

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SUMMARY

Therefore the specialists must to recommend to the workers that use thermal engines
to use revolution regime that leads to values determining, in the same time with
the obtaining of the full power of the engine and using more of it.

It was taken in study two situations of using (in our case) thermal engines that equip
agricultural machines. Stationing work, when the engine power is used to action the work
equipment, hydraulic installation, wheels of a the most frequent thing power price;

Work during moving, when is made traction work and traction work combined with
the action of the equipment of work. The experiments were made on tractor in the
experimental field of S.D.E.B.M. on plan soil. For measuring the motor moment at the power
plug it was used a voltage meter with moment motor. For revolution measuring were used a
intensity translator. For determining, traction force were used a double.

The same results were made in field are populated in table no.1. Depending on the
efficiency of traction \( r_t = 0.7...0.75 \) and of the transmission mechanical efficiency of the final
shaft of the power plug \( r_p = 0.91 \ldots 0.95 \), the real power sent for auto moving is approximate
25% from the engine power respective approximate 18kw, staying free for the work percent
approximate 60kw, that means a big capacity of work. (table 1). It is recommend too the
workers that use thermal engines that equip the motor vehicle, to use revolution regime that
leads to values determining, in the same time with the obtaining of the full power of the
engine and using more of it.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>U.M.</th>
<th>Engines power</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No load</td>
</tr>
<tr>
<td>Engine revolution</td>
<td>Rot/min</td>
<td>1830</td>
</tr>
<tr>
<td>Revolution p.p</td>
<td>Rot/min</td>
<td>544</td>
</tr>
<tr>
<td>Moment p.p</td>
<td>Dan.m</td>
<td>7,0</td>
</tr>
<tr>
<td>Power consumption</td>
<td>Kw</td>
<td>4,8</td>
</tr>
<tr>
<td>Speed</td>
<td>Km/h</td>
<td>-</td>
</tr>
<tr>
<td>Specific consumption</td>
<td>Kg/kw.h</td>
<td>1,85</td>
</tr>
</tbody>
</table>

Table 1