

# Improving the Pickup of a 110cc 4 Stroke Single Cylinder Petrol Engine

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**Abstract**— The present technology focussing upon usage demands and problem sorting techniques to fulfil desires of one and all in the society mean while it is concentrating on nature procurement by maintenance, to get it fix with numerous solutions and alternatives. Automobiles have an advantage and features that makes human excite to own it, for their wants. Pickup, is a point where low speed of an automobile crosses its speed to expected one; it is necessary to reduce the time. In general, the pickup of an engine takes about 10 seconds. Here results achieves better speed in short duration. Need of one getting increased upon usage and feature failures, such failures are getting sorted by technical engineers with difficulties and essentialities of human. This paper provides such solutions that make people benefit with what they expected. The parameter pick up makes one excited to choose it due to its advantage and necessary of usage. Tests have been conducted, made for times, to get accurate values, such points given in this paper. As of now, trends of men are getting increased in, within short days. The method that we followed here, is accelerating a vehicle by regulating its pressure at various bars to both tyres so that Speed of an engine found to be that has been raised by 40 - 48 kmph just in 6 seconds and 70 – 80 kmph in 8 – 9 seconds when an engine regulated at various bars of pressure. Thus, Pickup of an engine maximised.

**Key words:** Pick up, Pressure, Speed

## I. INTRODUCTION

Implementation of this experiment is due to acquire improvement in pickup to save time and length of journey. It is connected with work, the one that has to be done in short periods & getting faster to reach right place. It plays a huge role in usage of vehicles it is in need of savings and wants for achievements

Duration of reaching destination should be short the running condition of the automobiles must be smooth soundless, and parameters like knocking and detonation & their effect should be less.

Time is a factor that can change one’s decision for better requirements in seconds,

The points that made us easier and simpler during experimentation:

- 1) By monitoring gear shifts
- 2) By Getting tank filled in early morning
- 3) No continuous braking

The operating conditions of an engine will be far better and will be in favour to the environment when it undergoes such a period of services in regular intervals which make engine effective the test that we conducting comprises of the parameters kept improving the requirement.

The speed regulations, altering of air pressures are the factors upon which concentration made us to go in depth of the subject. However, on the other side of the owning,

rating and rate on purchase upon which we focussed to make it possible so we thought to get it done with the engine we choose. We made it necessary with the current engine and we improved its pickup such factors with respect to parameters tabulated in the results and the points of improved pickup were highlighted

## II. EXPERIMENTAL DETAILS

### A. Experimental Arrangements

A litre tested bottle was set to a 110cc 4 stroke single cylinder petrol engine. Image of tested litre bottle highlighted below:



Fig. 1: Tested 1 litre Bottle

### B. Experimentation

Several investigations have made to get accurate points such sequential steps made us to facilitate, to improve pickup of an engine. Such procedure is as follows:

Varying pressure of a front tyre of a vehicle at 30 and 40 bars, by varying back tyre pressure from (40 – 60) bars Accelerating an engine at regulated pressures as given in the table

We have started an engine and made to run it at regular intervals as shown in the table below:

S. No:	Pressure applied to front Tyre (bars)	Pressure applied to back Tyre (bars)
1	30	40
2	30	42
3	30	44
4	30	46
5	30	58
6	35	40
7	35	42
8	35	44
9	35	46
10	35	48

Table 1: Pressure Regulations

Using stop clock pickup of an engine have been investigated such values are given in results and discussion have been made on comparison

During operating conditions, we followed some tips to maintain engine, that to run at smoother conditions by no hard braking.

We repeated this procedure for getting accurate values

Thus, we gathered the information related to experiment, such data was highlighted in this paper.

C. Working Condition

Observations have been made to fix all proper validations and given the working condition of the vehicle in the results

D. Risk Prevention

By following rules and regulations insisted by authorities, by making essential moments (turns/twists), by guiding vehicle at necessary paths specified, by vehicle checks for regular intervals and on servicing at regular periods Thus risk can be prevented.

III. RESULTS & DISCUSSIONS

Keen observations have made for several points and Traced all results as conduction of an experiment accomplishes and Tabulated here below:

S. No:	Pressure applied to front Tyre (bars)	Pressure applied to back Tyre (bars)	Time (sec)	Pickup (kmph)
1	30	40	4	50
2	30	42	5	60
3	30	44	8	70
4	30	46	7	80
5	30	48	8	80

Table 2: pressure regulations and resulted pickup

Pickup of 80kmph in 7 seconds was found to be the good one at 55 and 60 bars of pressure in back tyre when 30 bars of pressure kept constant

In the table above by maintaining front tyre pressure constant and by varying back tyre pressure we calibrated pickup of an engine with respect to time

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S. No:	Pressure applied to front Tyre (bars)	Pressure applied to back Tyre (bars)	Time (sec)	Pickup (kmph)
1	35	40	5	45
2	35	42	6	55
3	35	44	6	65
4	35	46	8	78
5	35	48	9	75

Table 3: pressure regulations and achieved pickup

Pickup of 78kmph in 8 seconds was found to be the good one at 55 bars of pressure in back tyre while 35 bars of pressure kept constant and the one is maximum as compared It was noticed that, even at shorter periods the pickup was achieved as best as good one

The graphs entail enhancement of a Pickup.



Fig. 1: Time vs Pickup1

Pickup of an engine was reached maximum in 7 – 8 seconds with bearable pressures

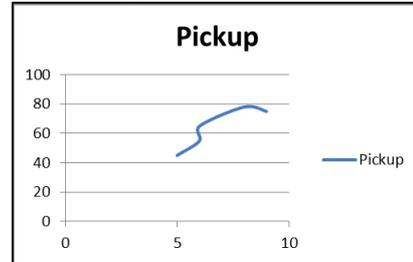


Fig. 2: Time vs Pickup

Pickup of an engine was reached maximum in 8 sec. Working condition of any automobile will get exhausted after completion of its task. Here, we made several tests and promote that the engine working condition was found to be better than exhausted one it is really appreciable.

IV. CONCLUSIONS

In this paper it's been focussed in increasing pickup with in short durations. Pickup of 80kmph in 7 seconds, 78kmph in 8 seconds was resulted at 30, 35 bars of constant pressure each in individual tests by varying 40 to 48 bars of pressure in back tyre

After making several attempts on an engine it is concluded that vehicle is free from Pollution & degree of hotness of an engine have come down in a short interval of time. Investigated engine upon which tests were conducted was found far better than normal one.

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