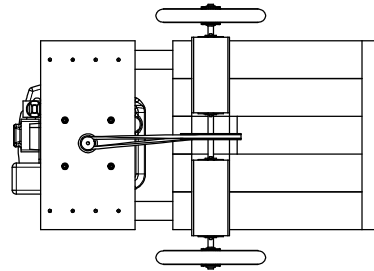


MOUNTING THE LAWNMOWER ENGINE TO THE CHASSIS #2

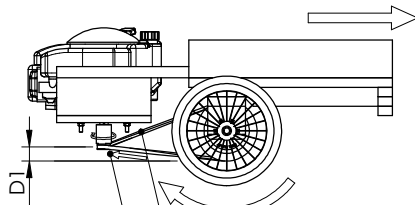
Before the lawnmower engine can be mounted to the kart, the small driving pulley wheel needs to be attached securely to the output shaft of the engine. Depending on the make and model of lawnmower engine, slight changes may be required. This page shows the modifications made to a small aluminium pulley wheel for a Briggs and Stratton engine.

Once the pulley wheel is securely attached to the engine's output shaft, the next key step is to align the engine up with the rear axle pulley wheel. Although the V-belt will twist through 90 degrees, and although it shouldn't come off, there are a few notes to remember, which will make sure that the v-belt will not come off and not wear excessively. See below for further details. (The front end of the Kart has been removed for clarity).



BOTTOM VIEW

The distance (D1) as shown, should be minimised as much as possible. This is because: In order for the kart to move forwards, the v-belt coming from the bottom of the large pulley on the Rear Axle must be pulled.

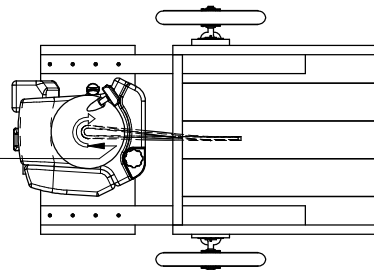


Return feed of the v-belt.

Pull Direction of the v-belt. Important to have this as straight as possible to prevent the belt from coming off.

From the Top View, the engine rotates clockwise.

Pull Direction. This needs to be as straight as possible.



TOP VIEW

20

The lawnmower engine with cylindrical sleeve and modified V-Pulley wheel.

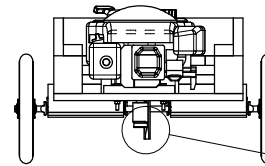
22

Exploded View of Cylindrical Sleeve (which came with the lawnmower engine), and the modified pulley wheel.

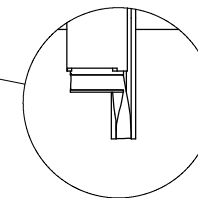
The lawnmower engine had a large cylindrical sleeve already attached to the output shaft. The cutting blade in turn fitted onto this large cylindrical sleeve. It is possible to modify a small pulley wheel to fit onto this large cylindrical sleeve, by cutting a groove out of the pulley wheel. A bolt (which came with the engine) can then be used to hold the pulley up in place onto the end of the output shaft.

Modified Pulley Wheel. The 8MM Bolt even at its tightest, would not be enough to stop the pulley from spinning independently of the engine's output shaft. Small Pulley Wheels are typically made from aluminium. A groove was cut into the aluminium pulley using a hacksaw and filed out flat. The 8MM bolt holds the pulley up in place, and the groove makes sure the pulley turns with the output shaft.

While it is not critical to have the alignment of the v-belt and pulley wheels 100%, (because the belt is V shaped, it will stay on the pulley wheels as it moves) if you find that your v-belt is coming off too regularly, then check your setup with the details on this page.

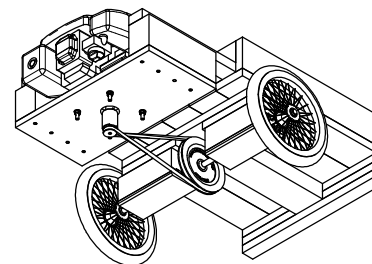


END VIEW



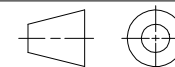
DETAIL M
SCALE 1 : 5

In order for the kart to move forward, the bottom of the large pulley wheel must be "pulled". Keep the "pull" direction of the v-belt as straight as possible.



VIEW UNDERNEATH THE KART

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF THE DESIGNER. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF THE DESIGNER IS PROHIBITED.



kartbuilding.net

TITLE: **ENGINE MOUNTING #2**

MATERIAL: AS SPECIFIED DATE: 17/10/2009

FILE NAME: Main-Wooden-Kart- SIZE: A4 REV. 1

SCALE: 1:20 DESIGNER: STEPHEN BURKE SHEET 17 OF 21