

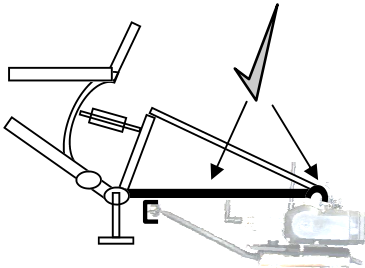
When checking a frame for suitability of engine fitment, use the following **4 PRE-REQUISITES** to determine whether the frame is OK for engine fitment. Rear suspension is OK as long as the following criteria can be met.

PRE-REQUISITE 'A'

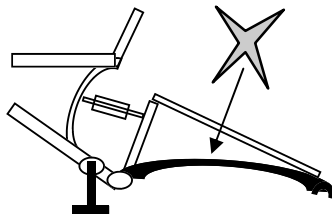
Shape of frame at rear. It is desirable to have a fully triangular (isosceles triangle) rear frame section with a STRAIGHT lower tube WHEN VIEWED FROM THE SIDE.

Project a line from centre point 'A1' to 'A2' as on the large diagram (bottom bracket centre to rear axle centre).

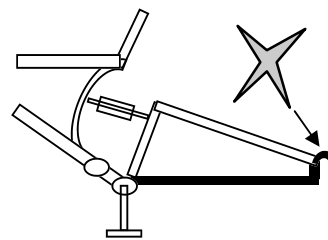
Frame tube 'A' must be straight from A1 to A2 . YES / NO ?



GOOD rear frame (swing-arm) shape comply with criteria.



BAD rear frame (swing-arm) shape NOT COMPLY, lower tube NOT straight.



BAD rear frame (swing-arm) shape NOT COMPLY, drop out TOO HIGH.

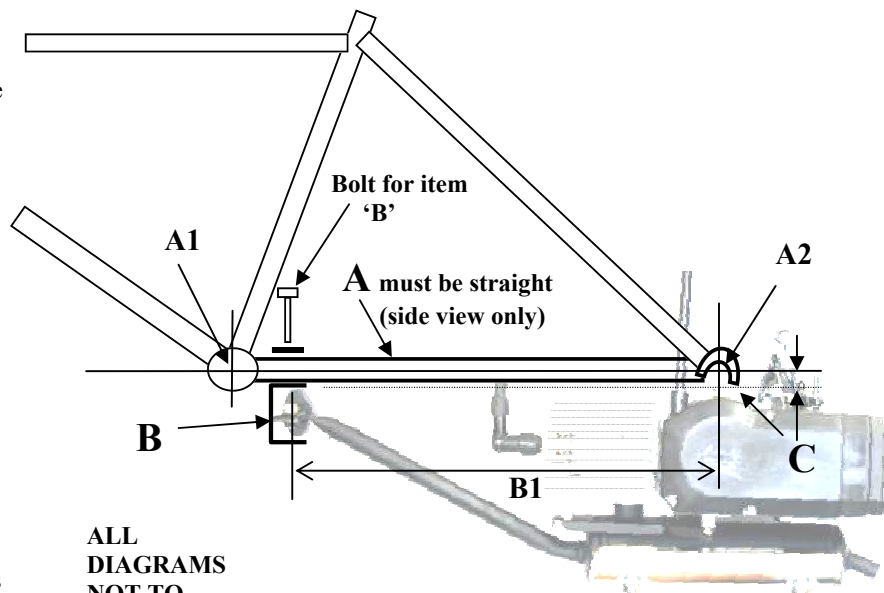
PRE-REQUISITE 'B'

Item 'B' in the diagram is the forward engine mounting (also centre stand mount). There must be provision to clamp this to the frame at this position. The underside of the frame must have no protrusions at this point.

Dimension 'B1' must be ;

FOR 26" KIT= 380mm +/- 5mm

FOR 24" KIT= 350mm +/- 5mm



ALL DIAGRAMS NOT TO SCALE

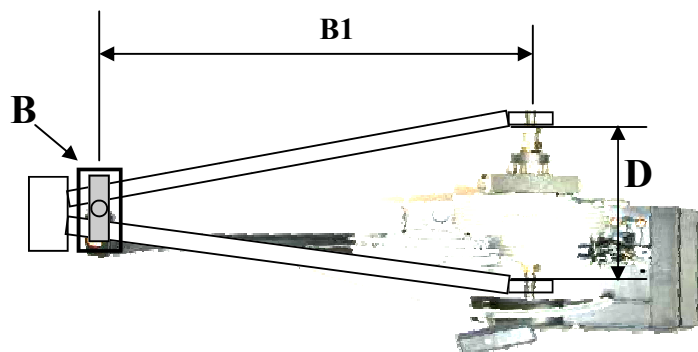
PRE-REQUISITE 'C'

There must be adequate clearance on top of the motor. Usually if item 'A' is correct, there is no problems here, unless engine sits 'high' in the rear drop-out.

PRE-REQUISITE 'D'

Rear drop-out spacing. This will depend on the free-wheel sprocket being used. Frames can generally be spread easily to accommodate as required.

As a guide;
 SINGLE SPEED 'D' = 136mm
 6-SPEED 'D' = 148mm



TYPICAL MODIFICATIONS TO FRAME REQUIRED

Not all bicycle frames are exactly the same. Obviously it's not possible to have an engine kit that fits everything easily.

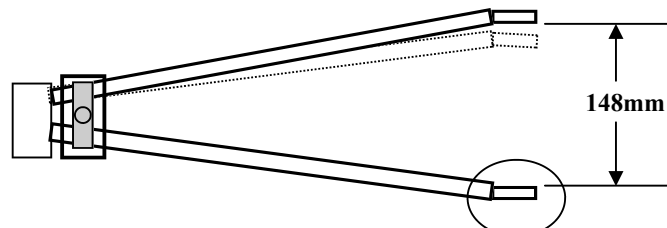
The previous page outlines the most fundamental requirement for frame shape required to accept the Rotary Engine Kit. Further to this there may still be some modifications required depending on application.

We have identified the 2 'most common' modifications required to fit the engine/wheel unit to a 'standard' mountain bike type frame. Generally these modifications are **ONLY REQUIRED** when using a 6-speed freewheel.

1) SPREAD FRAME SLIGHTLY, R.H SIDE ONLY.

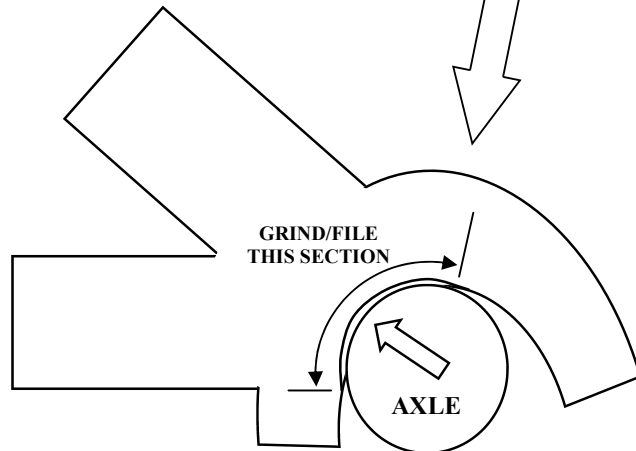
Spread the rear fork (drop-out) on the RH side only so that the 'new' distance between the rear axle drop-outs is **148mm**.

Because this 'bending' happens in an arc, (on two planes) this action also tends to result in the axle moving forward & up approximately 1.5mm from its original 3D position. Operation 2 (below) is to counteract this tendency.



LEFT SIDE ONLY

2) FILE or GRIND OUT APPROXIMATELY 2mm FROM LH DROP-OUT SO AXLE CAN MOVE FORWARD & UP.

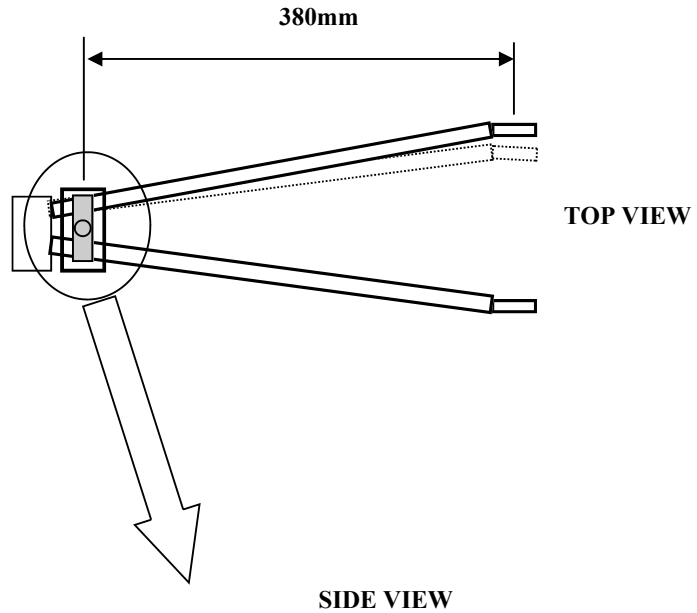


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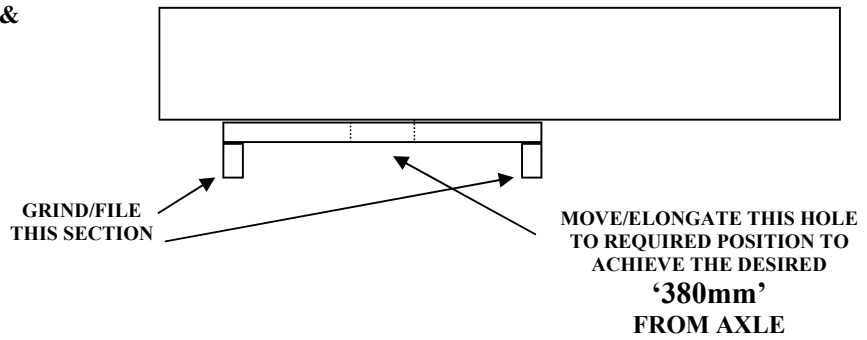
3) FORWARD ENGINE MOUNT (TORQUE REACTION MOUNT) MIGHT REQUIRE FRAME MODIFICATION TO FIT.

Sometimes the desired '**380mm**' distance is not always achievable with certain frames.

Usually because the frames original stand mounting point is 'not standard'.



4) FRAME BEFORE MODIFICATION & MOUNT FITMENT



5) FRAME AFTER MODIFICATION & MOUNT FITMENT

