$20 Rocket III Motorcycle Stand

These plans are taken from a set of instructions which I found on the web a couple of years ago but can no longer find. I give credit to whoever it was that first thought of this idea and showed how to do it. The bracket is my idea, but you are free to do what you want with it.

Materials.

Base

1. 7' of 2x8 lumber
2. 36” of 1” galvanized pipe (threaded at one end)
3. 1” threaded galvanized base
4. Wood Screws 2½”
5. Wood glue

Bracket

1. Angle-Iron 1½” x 18”
2. ¾ Ply 13½” x 5½”
3. 2 x Bolts, washers and nuts $^{7}/_{16}$ x 1½” (Metric 12 x 40)
4. 7 x Roundhead, slotted Bolts, washers and nuts ¼” x 1” (Metric 10 x 25)
5. 4 x Roundhead, slotted Bolts, washers and nuts ¼” x ¾” (Metric 10 x 18)

Instructions

Base

1. Cut the 2x8 into two 42” lengths.
2. Join these together using the 2½” wood screws and glue. Use plenty of screws for as much strength as you want. You should end up with a block 42x4x8. (In reality it will be closer to 36x3x7½ because of the way they cut lumber.)
3. Drill a 1” hole 3½” in from one end, and in the center of the beam. That would be about 3¾” inches in from each side, in case you hadn't figured that out :)
4. Attach the galvanized base to one end of the hole. If you want to get fancy then you can countersink so that it is pointed inwards, otherwise just attach it so that it points out. (It depends on whether you like “innies” or “outies”)
5. Push the pipe through from the other end of the hole and screw it into the galvanized base.

Base



This simple machine will lift just about any cruiser on the market, especially of the v-twin variety. All you need to do is place the wooden bit under the bike just to the rear of the kickstand, and with the handle (pipe) on the LHS of the bike. Pull the handle towards the back of the bike and the bike will lift up onto the stand. You will be amazed how stable the bike is when lifted this way.

If you do want absolutely rock-solid stability then you can attach an eye-bolt at each end of the beam and use tie-downs to really fasten the bike down.

However, because the RIII does not have a frame under the engine this system, as it is, will not work. The bike will probably fall over. So here is the bit that makes it work for the RIII.

Bracket

1. Cut a 13½" length of the angle-iron.
2. Cut 2 x 1½" lengths of the angle iron.
3. Drill a generous $^{7}/_{16}$" hole (bolt should move freely and easily through it) in each of the short pieces of angle-iron. These should be ½" from the outside of the angle-iron, and centered along their length. (Fig. 1)
4. You will need to cut the rear corner off the piece which will be on the RHS of the bike when the bracket is mounted to prevent interference with bits on the bike. (**Fig. 2, 5**)
5. Drill 2 holes to attach one of the short pieces of angle-iron to the end of the large piece. (**Fig. 1**) It is easiest to clamp them where they need to be before drilling so that the holes line up.
6. Do the same for the other end.
7. Attach them using the 4 x ¾" roundhead bolts. (**Fig. 1**)
8. The 5 x ply will attach to the inside of the length of angle-iron. Mark it where the bolts (already in place) will need to go through it and drill holes big enough for them to fit.
9. Clamp the 5 x ply to the angle iron so that it looks like **Fig. 3**.
10. Drill 7 x ¼" holes throughout the the length of the angle-iron and 5 x ply in order to attach the 5 x ply to the angle-iron. These should be staggered and reasonably even.
11. Using the 7 roundhead slotted bolts, attach the 5 x ply to the angle-iron. You may wish to countersink the 5 x ply first. However, they will probably countersink themselves when they are tightened. The roundheads are on the wood side, the nuts and extra length are on the angle-iron side. (**Fig. 3, 4**)
12. Cut a section 2" wide and 1½" deep 3" in (the other side of the section will be 5" in) from what will be the LHS of the bike when the bracket is mounted. (**Fig. 4**) This will allow access to the rear oil drain plug. (**Fig. 6**)

Fig. 1

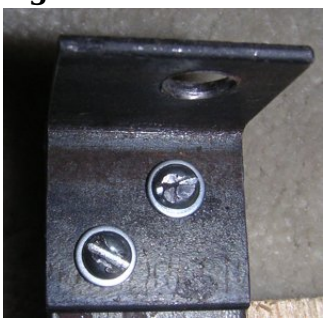

Fig. 2

Fig. 3

Fig. 4

Fig. 5 (RHS of bike)

Fig. 6 (LHS of bike)

These photos are from the original prototype model. The instructions above will give a better looking bracket with a new and improved design.

This bracket attaches to the RIII using the center-stand mounting points which are on the bike and the 2 x $^{7}/_{16}$" bolts. (It is easier to feed the bolts outwards from the inside of these mounting points and then attach the nuts from the outside.) The nuts only have to be loosely finger-tightened to stop the bolts from falling out. The wooden part faces forwards. This will then supply a solid bracket for the base to be used to lift the bike. (**Figs. 5, 6**)

Base under bracket

Bike Raised, LHS

Bike Raised, RHS

After attaching the bracket, lift the bike in the manor described above and as shown in the photos. The bike is extremely well balanced and stable. The front can be lifted with only the lightest effort when required.

Bracket resting on Base

IMPORTANT

1. **Make sure that you remove the bracket after using and before riding.** Serious injury and damage to the bike may occur if this is not done.
2. These plans are given with the understanding that you use them at your own risk. If you do not know know how to use equipment safely and/or do not have common sense then you should not use these plans or this equipment, in fact, you probably should not even be riding.