



Thank you for purchasing Happy Trails products. Our products are proudly hand made in Boise Idaho, USA. If you have any questions or concerns about the installation of this product, please contact us directly at 1-800-444-8770 or e-mail installation@happy-trail.com.

Before you begin, place the bike on a hard level surface where you have room to work. Let bike cool. Lay out the parts included in this kit and compare to the parts list on the last page of these instructions. If any parts or hardware are missing, contact us immediately at the number listed above.

Step 1: Remove the factory Skid Plate

Ensure the exhaust is cool, loosen the two head pipe nuts, you do not need to completely remove the nuts, just loosen (**Figure 1a**). A ratchet wrench works well. Next, remove the two side bolts from the skid plate sides (**Figure 1b**). The exhaust side is tight and you may have to have someone hold the exhaust while you remove the bolts from the skid plate. Next, remove the two front skid plate bolts (**not pictured**). Lower the skid plate carefully, there are two tubes that need to be carefully disconnected to remove the skid plate from the bike. Please see Figure 2 on the next page for details. NOTE: You will reuse these six bolts for installation of the Happy Trails skid plate.

Figure 1B



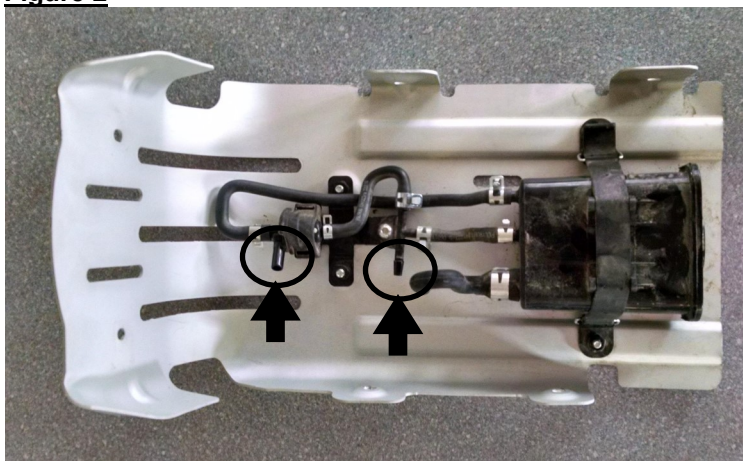
Figure 1A



Step 2: removing the skid plate

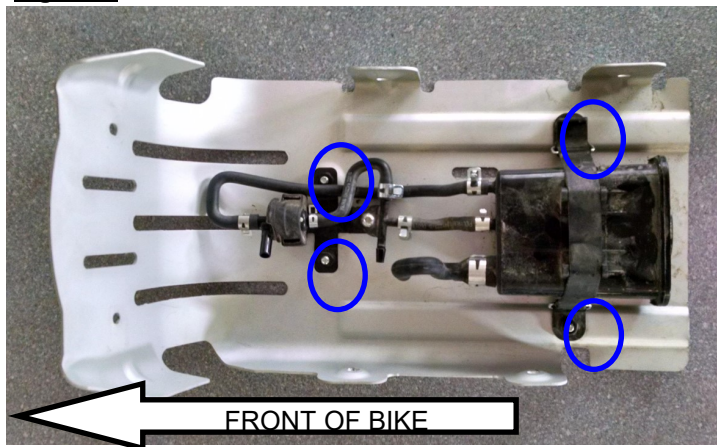
The circled fittings are where the tubes need to be carefully removed from the fittings when removing the factory skid plate. There are metal clamps attaching the tubes to the fittings. **Figure 2**

Figure 2



Step 3: Swapping the smog canister

Figure 3

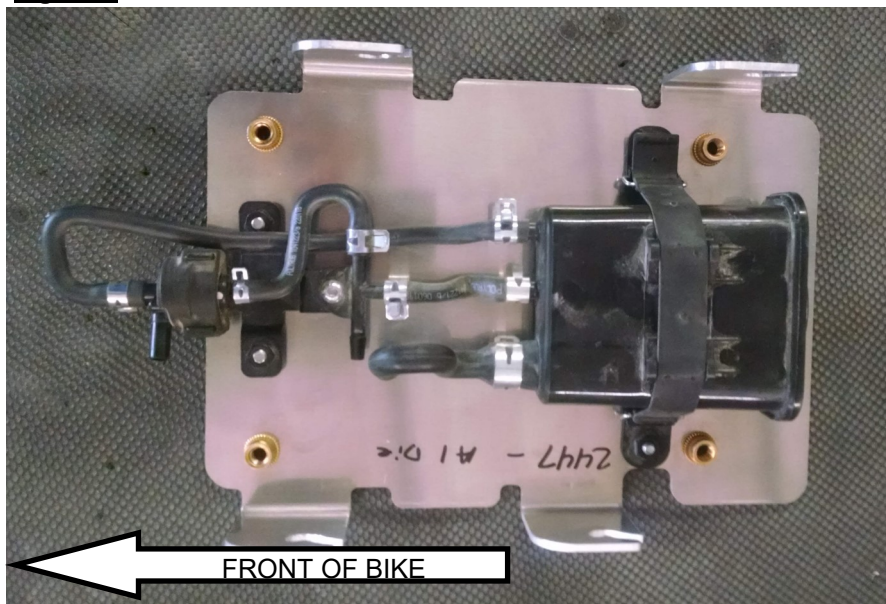


Take some pictures of your canister assembly before you remove it from the factory skid plate to compare with once you reinstall onto the Happy Trails base plate.

Remove the four bolts from the circled positions on the skid plate shown in **Figure 3**. **Note the orientation that the rear rubber strap holders are facing, this will be replicated in the next step.**

Remove the canister assembly from the skid plate and place on the Happy Trails base plate as shown in **Figure 4**. You will reuse the two rear bolts in

Figure 4



addition to the provided 6mm washers to attach the strap holders (note original strap holder orientation). Place two 1/2" OD x 1/4" L x .257 ID. spacers in the front mounting location between the base plate and the threaded mounting tabs, use the provided 6x20 BH bolts & washers. Tighten all hardware ensuring all the hoses are lined up. Compare the canister assembly to the pictures you took earlier to ensure the assembly is correct.

Step 4: mount the base plate to the bike

Reinstall the side bolts (see **figure 5**) into the frame that attached the factory skid plate (using the supplied 6mm washers) referenced in step 1 on the first page of these instructions **DO NOT TIGHTEN THESE BOLTS YET**. Place the base plate up to the bottom of the engine (see **figure 6**), attach the two hoses that you removed from the smog canister in **step 2, figure 2**, Slide the base plate into place from the front to back motion allowing the bolts to rest in the slots in the base plate. Push up towards the engine from the bottom of the base plate, **tighten all bolts while applying pressure**.

Figure 5—Bolts started**Figure 6 Base plate installed****Step 5: Tighten head pipe nuts that you loosened in step 1 (see figure 7)****Figure 7 Head pipe nuts**

Step 4: Mount the skid plate to the base plate.

Place the skid plate up to the base plate and loosely attach the four bottom bolts (see **figure 8**) using the supplied 8x25mm BH bolts and supplied 8mm washers. Next loosely attach the front of the skid plate (see **figure 9**) to the threaded tabs on the frame using the BH bolts that came out of this position with the factory skid plate. Use the 6mm washers that are provided. **Tighten all bolts.**

Figure 8 Bottom view of skid plate showing the four bottom mounting holes.

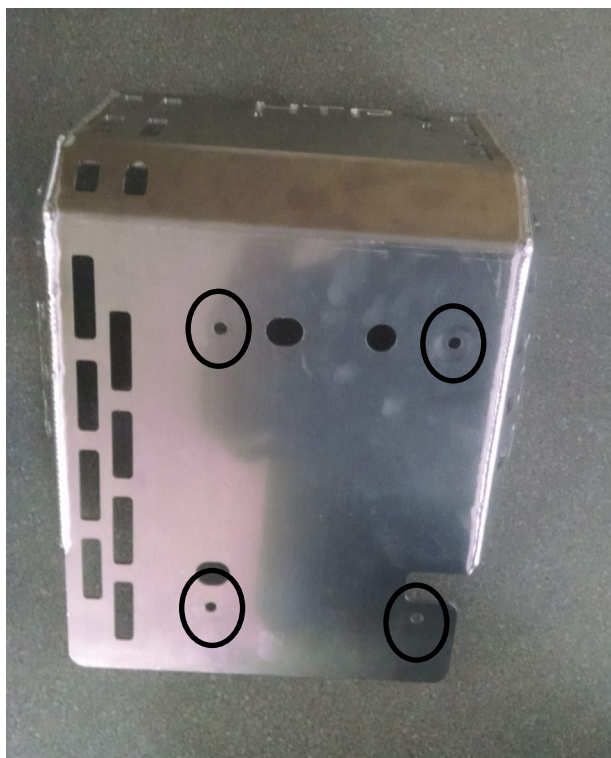
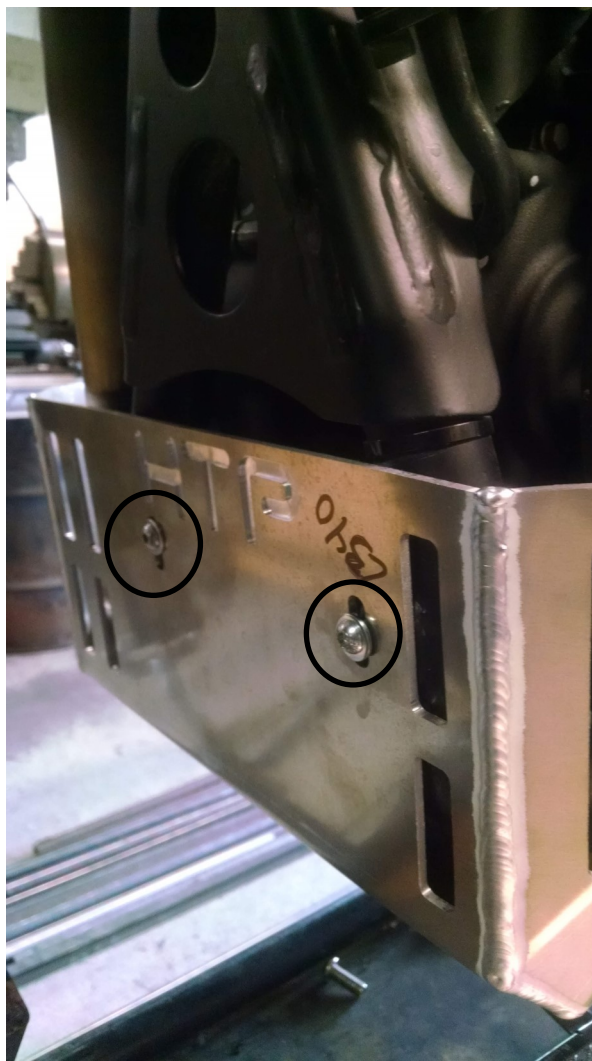


Figure 9 Front view of skid plate showing the two front mounting holes.



Tools Required:

- 10mm and 12mm Sockets
- Ratchet with 6" Extension
- 10mm, 12mm (ratchet wrench),
- 5mm, 6mm Hex Key (Allen Wrench)



Bolt Kit List:

- 4 M8x25 Hardened 12.9 BHCS
- 4 8MM Flat Washers
- 10 6mm Flat Washers
- 2 M6X20 BH Bolts
- 2 .1/2" OD x 1/4" L x .257 ID.

Hardware List:

- 1 Skid Plate
- 1 Base Plate
- 1 Bolt Kit
- 1 Instructions



08/22/18
JW