



# HAPPY-TRAIL.COM

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Before you begin, place the bike on a hard level surface where you have room to work. Lay out the parts included in this kit and compare to the parts list on page 5 and 6 of these instructions. If any parts or hardware are missing, contact us immediately at the number or email listed above.

### Step 1

On the right (brake) side of the motorcycle remove radiator shroud by removing the Allen (or Torx) screws indicated by arrow 1. Remove two additional screws located on the front side of the radiator shroud. Set the screws and shroud aside in a safe place as they will be replaced later.

Remove the engine mounting bolts marked 2 and 3 using an 8mm Allen Wrench (or T47 Torx on newer models.) **Use caution when removing bolt #2 as there is a nut on the back side of the bolt. If the nut is dislodged it can be difficult to re-start.**

### Step 2

Two plastic covers are screwed into the threaded inserts in the lower part of the motor, shown by the two arrows in Fig 2.

Unscrew the covers to expose both holes.

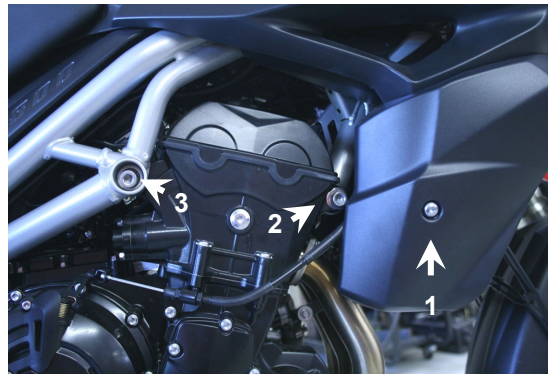
### Step 3

Next, place the right side mounting plate (MT-3) into the threaded holes exposed during Step 2.

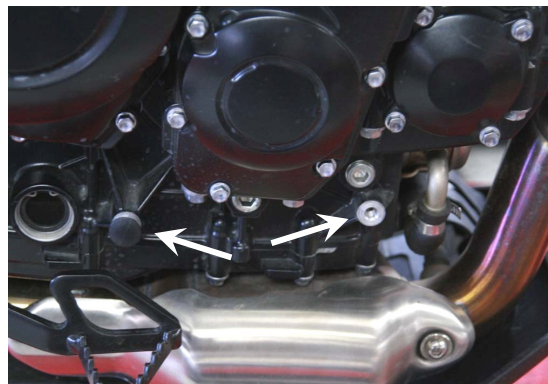
Attach the rear mounting point with an M825S bolt and M8 flat washer.

Attach the front mounting point, place a 5/8"L x 1/2"OD spacer and a M8 flat washer behind the front attachment point. Thread an M840S bolt with another M8 flat washer through the front attachment point. Torque both bolts to 16.2 ft/lbs.

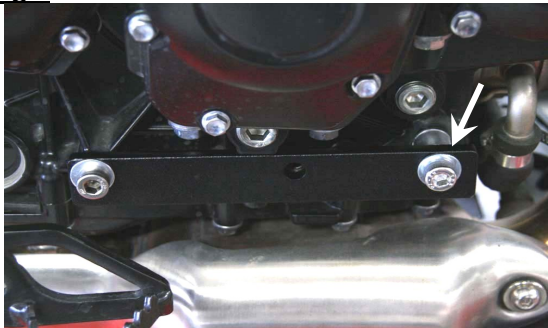
**Fig 1**



**Fig 2**



**Fig 3**

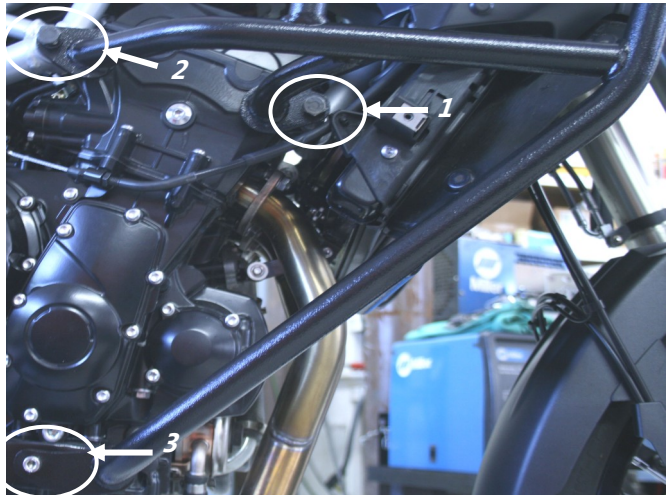


#### **Step 4**

Place a 1"L x 0.75" OD aluminum spacer in the space left after removing bolt 3 from step 1. Hold the engine guard in place and begin threading the M1075C bolt through the rear motor mount bolt indicated by arrow 1. Do not tighten the bolt completely.

Place an M840S and M8 flat washer bolt through the hole indicated by arrow 3. Place a 0.75"Lx0.75"ODx.319" spacer between the nerf engine guard and mounting plate (MT-3).

**Fig 4**



#### **Step 5**

Place the 1"Lx0.75"OD spacer behind the front mounting point from arrow 1 in Step 4. Carefully insert a hardened M1090C bolt through the engine guard, spacer and motor mount, turning slightly as the bolt goes into the hole.

If you do not feel slight resistance against the bolt while threading it in, the nut on the reverse side has fallen out of position. **If this is the case, continue to the next photo—**

**Fig 5**



#### **Step 5 Continued (if necessary)**

Move to the left (clutch) side of the motorcycle. Using a long (at least 14") socket extension, place the M10 nut in a 14mm socket and reach between the frame and head of the motor and begin threading the nut onto the bolt through the top forward engine guard mounting point as shown in Fig 5.

A universal joint socket adapter may make the installation easier but is not necessary. Use your other hand to reach over the seat of the motorcycle to place a 17mm wrench on the bolt for tightening. Do not tighten this bolt completely.

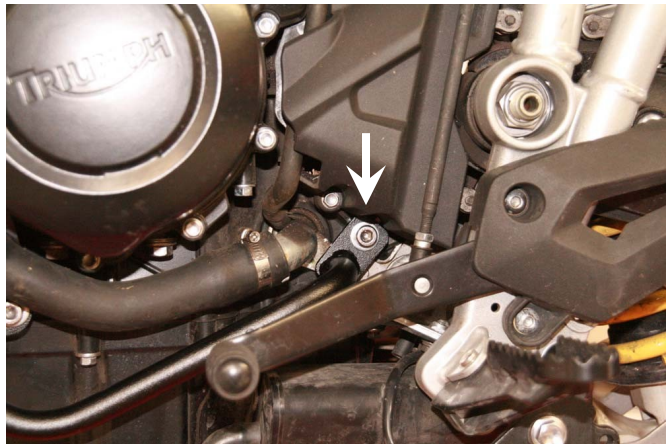




**Step 6**

Remove the plastic cover over the bolt hole under the countershaft cover in the location marked with an arrow in Fig 6. Attach the lower mounting bar (MT-1) using an M825S bolt and M8 flat washer. Do not tighten this bolt completely.

**Fig 6**

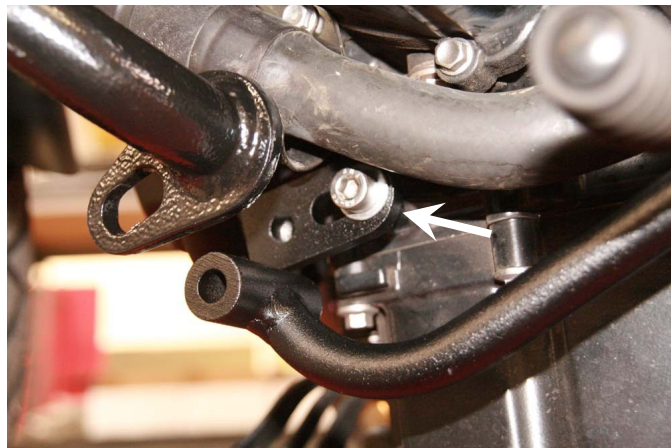


**Step 7**

Remove the plastic cover from the front of the crank case near the coolant line shown in Fig 7. Thread an M825S bolt with M8 flat washer through the exposed hole, attaching the slotted tab (MT-2) as shown in Fig 7.

Do not tighten this bolt completely until you know the angle it needs to be to line up with the nerf tab bolt in Step 10. Because it is difficult to reach this bolt once nerf tab is bolted in place, we recommend tightening to 16.2 ft/lbs just before starting Step 10.

**Fig 7**



**Fig 8**

**Step 8**

Remove the bolts marked 1 and 2 using an 8mm Allen Wrench (or T47 Torx on newer models. )

**Note that when the bolts are removed aluminum spacers will fall from between the motor and frame. Take care not to lose these spacers.**

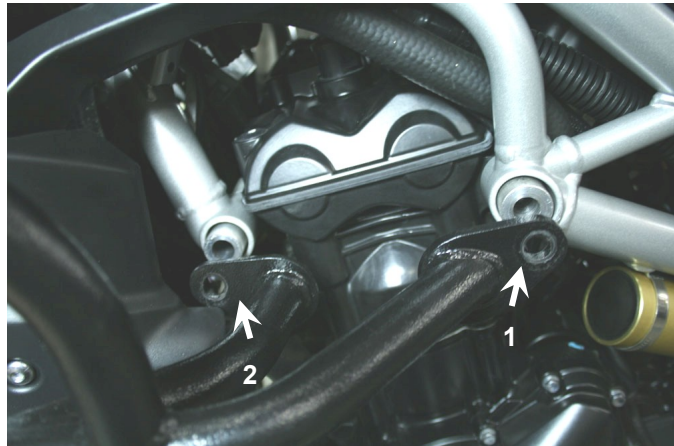


### **Step 8a**

Place the 1.4"Lx.86" spacer in the front motor mount and the 1.28"Lx1" spacer in the rear motor mount and hold the engine guard in position. Begin threading the M1075C bolt into the motor mount indicated by arrow 1. **Place one of the 1/8" aluminum washers which likely fell out during the previous step between the frame and engine head before fully inserting the bolt.** Gently thread the bolt in place but do not tighten completely.

Note the M10100C bolt in step 9 will go into location shown by arrow 2 in Fig 8a.

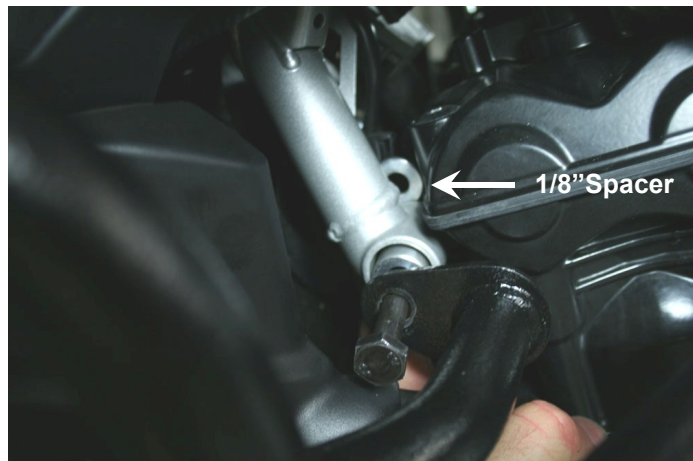
**Fig 8a**



### **Step 9**

**Slide the 1/8" aluminum spacer between the frame and motor as shown in Fig. 9.** With one hand reach under the frame and attempt to start threading the 14mm nut onto the M10100C bolt shown in Fig 9. It is a tight fit but it can be done. If this is overly difficult a 14" socket extension can be used to reach from the right (brake) side of the motorcycle to the nut. Do not tighten the bolt completely.

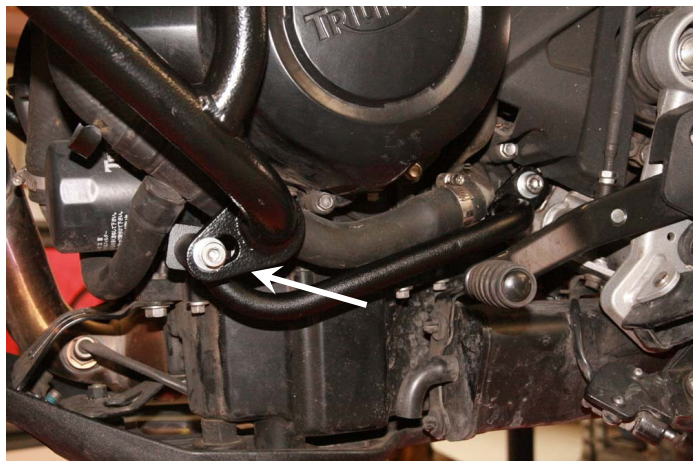
**Fig 9**



### **Step 10**

Insert an M870S bolt and M8 flat washer through the lower attachment point on the left side engine guard as shown in Fig 10. Begin threading the bolt into the insert in the slotted tab which was installed during step 7 but do not tighten completely.

**Fig 10**



### **Step 11**

Place two M825S bolts through the tabs in the cross bar as shown in Fig 11. Thread them into two M8 Nylock nuts.

Replace radiator shroud removed in step 1.

You may now tighten all bolts completely. The torque specifications are:

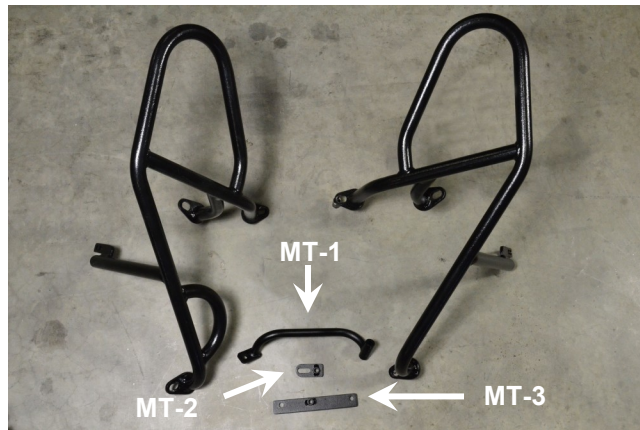
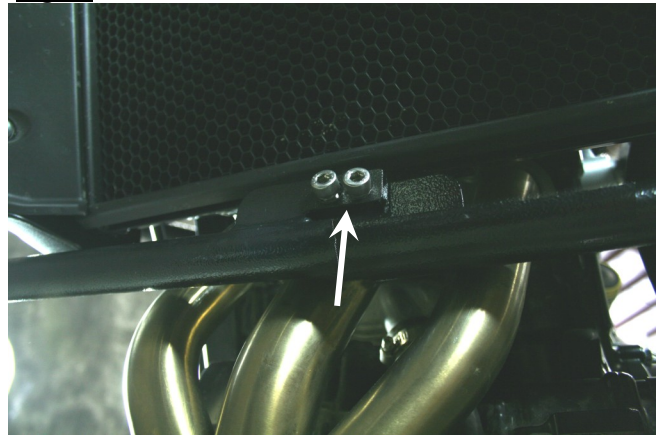
10mm bolts — 40ft/lbs

M8 bolts that go into the engine case —16.2ft/lbs  
(due to aluminum threads)

Other M8 bolts —18ft/lbs

Don't forget the "hidden" bolt from Step 7 if it has not already been torqued.

**Fig 11**



### **Hardware List:**

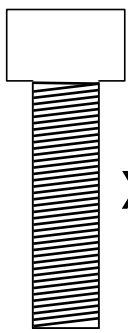
Left and Right Nerf Bar  
MT-1 Bracket  
MT-2 Bracket  
MT-3 Bracket

Bolt Kit  
Instructions

### **Recommended Tools:**

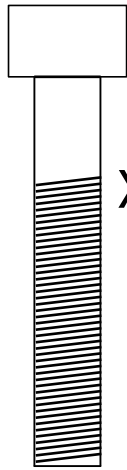
- Torque Wrench
- 12mm Wrench or Socket
- 13mm Wrench
- 14mm Socket
- 17mm wrench or Socket
- 3/8" driver ratchet
- 5mm Allen Wrench
- 6mm Allen Wrench
- 8mm Allen Wrench
- T47 Torx (newer models)
- 14" extension for 3/8" drive ratchet (or two+ shorter extensions connected)
- \*Optional 3/8" Universal Joint Socket Adapter





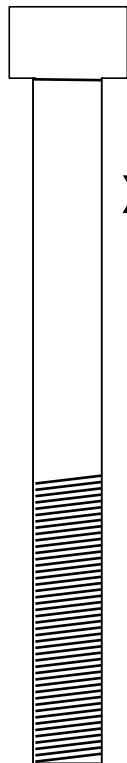
M825S

X5



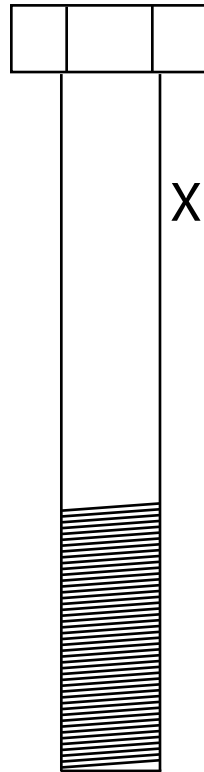
M840S

X2



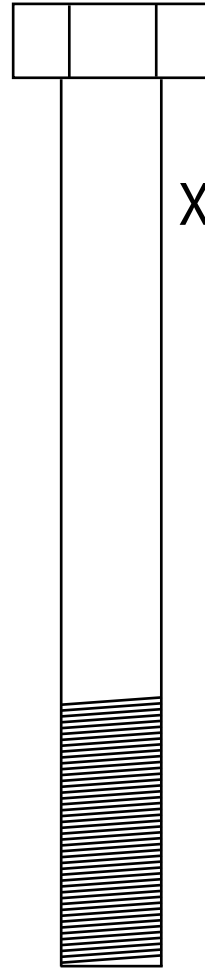
M870S

X1



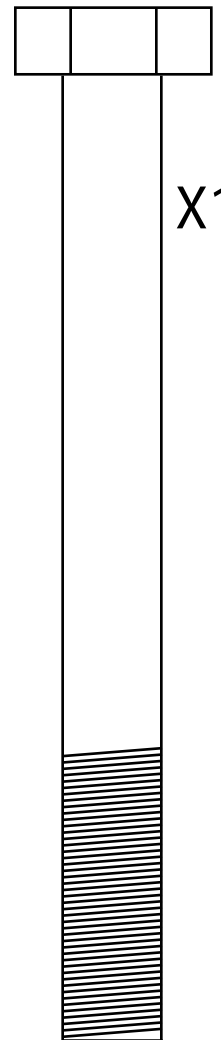
M1075C  
1.25tp

X2



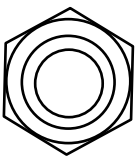
M1090C  
1.25tp

X1



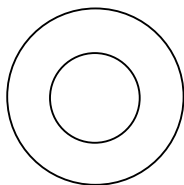
M10100C  
1.25tp

X1



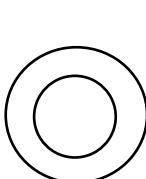
M8N

X2



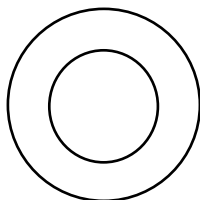
M8 Flat Washer

X7



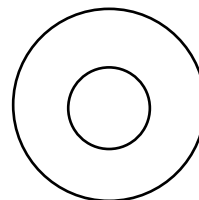
OD.1/2", ID .319, L 5/8"

X1



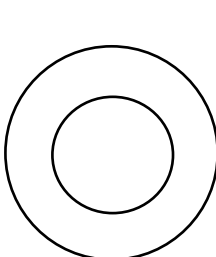
OD3/4, ID .509, L 1" Spacer

X2



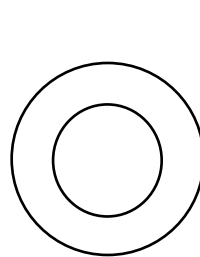
OD3/4, ID .319, L 3/4 Spacer

X1



OD 1", ID .509, L 1.28" Spacer  
(Powder Coated)

X1



OD.86", ID .509, L 1.4" Spacer  
(Powder Coated)

X1