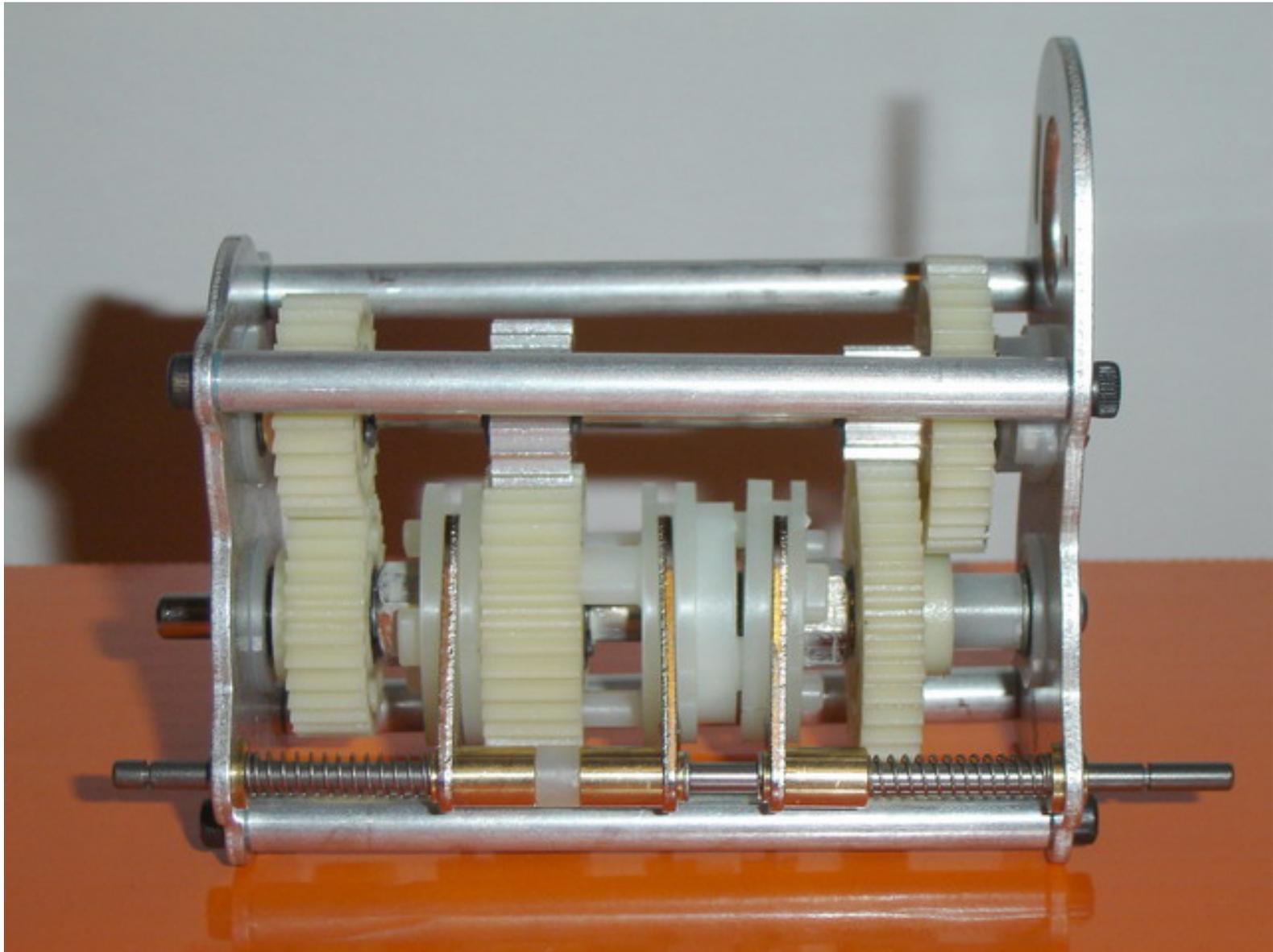


Tamiya - 3 Speed Rig Tranny



Everything you ever wanted to know, and some you didn't!

So you want to get a 3 speed for your project? Your going to have to do one of the following: Either break apart a rig (shame on you) or order your own tranny. There is a lot of confusion when you try to figure out what part numbers you need to order. Different rigs have different part bags. I originally went thru an Aeromax and ended up needing about 10 plus bags to make a complete tranny. And then there would be a ton of parts left over I didn't need. That's a lot of wasted \$\$\$\$. Luckily there is a better way!

The simplest way to order your tranny is to get these 4 items:

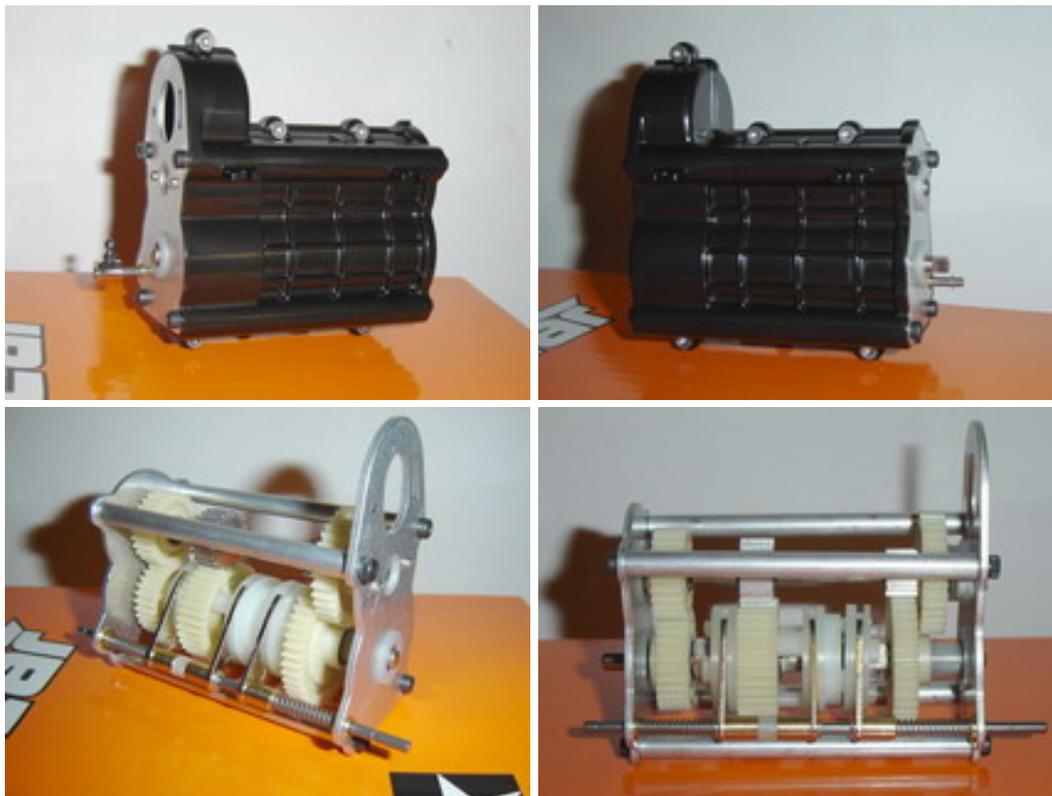
Part #	Description
9115047	Tamiya J Part (Shift hubs)
0005468	Tamiya B Part (Gearbox cover)
9400029	Tamiya Gear Shaft Bag
9335128	Tamiya Gear Bag

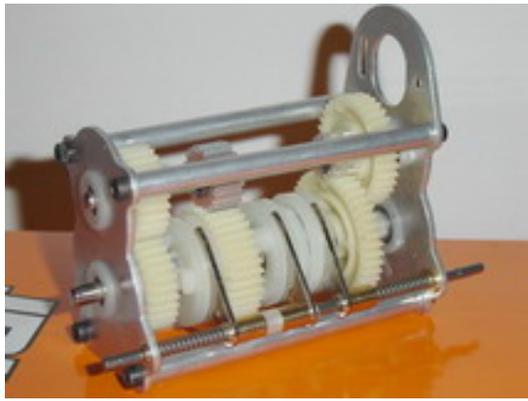
Plus you will need to supply the following parts:

- 6- 5x11 bearings
- 6- 6x12 bearings
- 2- 2x6mm machine screws
- 2- 2mm nuts
- 8- 3x6mm machine screws
- 5- 3x8mm machine screws
- 5- 3mm nylock nuts
- 12- 4mm e clips
- 2- 2mm e clips

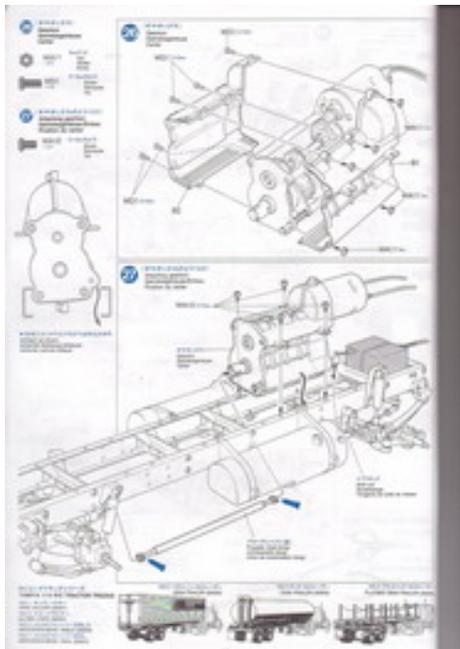
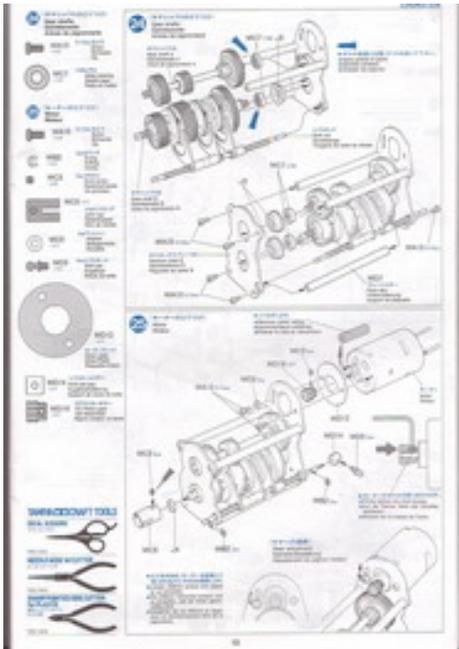
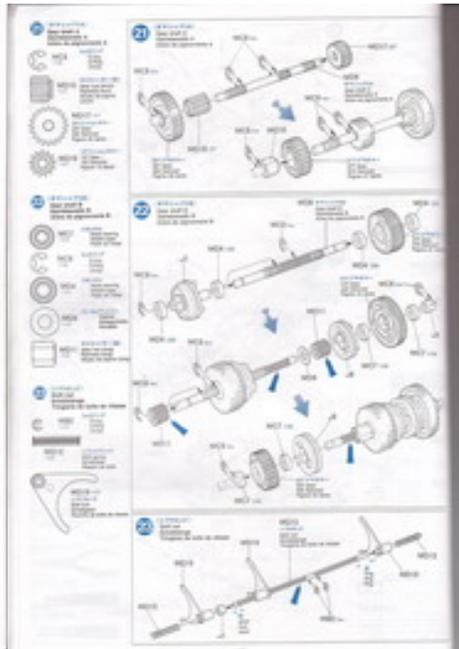
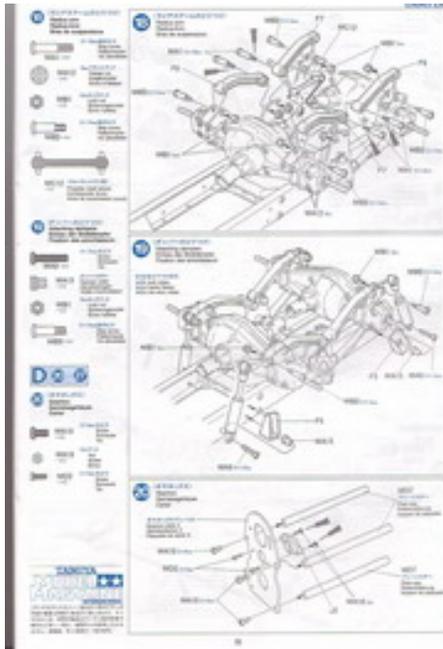
After all the parts have arrived and you spend some quality time building. (Nothings better then a Tamiya build) you end up with this:

Pictures:





Manual:



But I want 4wd!!!

So now that you have your tranny built you need to decide what to do about making it 4wd. The problem with this is there are very few ways to do this that doesn't require a lot of custom work. RC Alloys is currently the only way to buy a transfer case that you can bolt up. The next simplest way is to make a divorced transfer case by a 2nd tranny. You mate the two trannies by either a dog bone or shaft. After that you are on your own to make you own transfer case. Some examples are shown below.

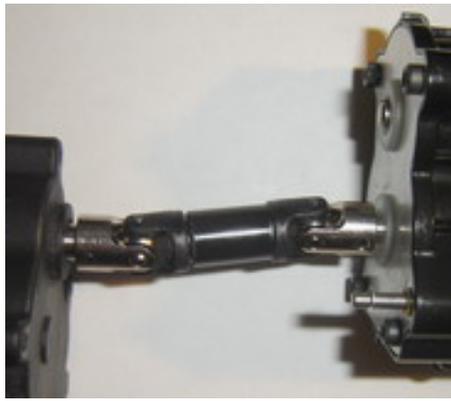
[RCAlloys](#) makes a great transfer case that bolts on.



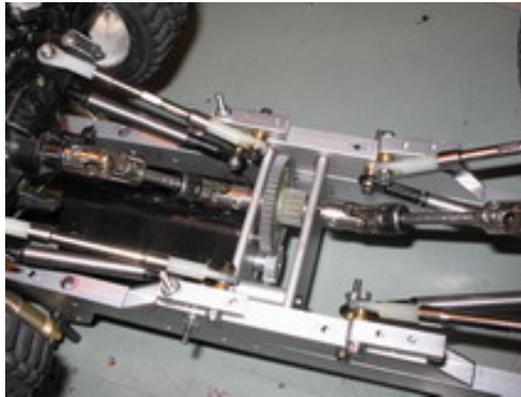
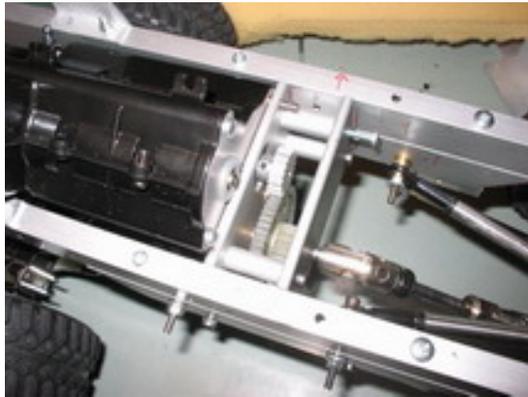
Some people have modified a TLT belt tranny to act as a transfer case.



A Stampede or Emaxx tranny can be used as a divorced transfer case. There are many different tranny's that you could use...



By putting a pinion gear on the tranny output. You can drive a spur gear of another tranny, or custom xfer.



(If any of these pics are a problem posted here, let me know and I will remove them)

Gearing?

I thought I would write a bit about gearing. Since you are interested in this tranny, gearing is

obviously important to you. Seeing as you want some choices. The standard gearing of each gear is as follows:

Pinion	1st	2nd	3rd
8	15.23	8.31	4.98
9	13.53	7.39	4.42
10	12.18	6.65	3.98
11	11.07	6.05	3.62
12	10.15	5.54	3.32

As you can see, changing your pinion gear changes the overall tranny gearing greatly. Then your choice of transfer case will help determine just how much of a gear reduction you will get to your axles. To figure out your total reduction of your vehicle you need to apply the following formula:

$$\mathbf{A * B * C = D}$$

Where **A** is the tranny ratio, **B** is the transfer case ratio, **C** is the axle ratio. You multiply these to get your total ratio, which is D.

So lets assume that your transfer case ratio is 2.63 (Which just happens to be the low ratio of a emaxx tranny) and we assume you want to use a TLT axle which has a ratio of 2.73. We would end up with the following result for your first gear using a 9 tooth pinion (Robinson Racing is easy to get in a 9 tooth)

$$\mathbf{13.53 * 2.63 * 2.73 = 97.14}$$

Now that's not a bad first gear ratio! By choosing your gearing choices carefully, you can design a drive train system that's right for you. From general bashing, right down to insane ratios for crawling. The choice is yours!

Conclusion

Hope that helps you in your decision to go with a 3 speed for your project. I know you won't be disappointed!