



The Clutch

By Macey and Jen

What is the clutch?

In basic terms:

The clutch disengages the transmission and rear wheel from the engine temporarily.



<https://www.motorcycleclassics.com/classic-british-motorcycles/triumph-tiger-cub-zmmz12ndzbea>

Where is the clutch and what does it look like?



<https://www.hotbikeweb.com/rekluse-exp-30-auto-clutch>



History of the Clutch

Early models of the clutch were just a pulley connected to a belt that connected the engine to the rear wheel.

Later on metal clutches with plates were invented

Suicide Clutch on Harley-Davidson Motorcycles (1952)

Dry ---> Wet clutches



https://www.123rf.com/photo_96324467_close-up-of-racing-motorcycle-handlebar-and-clutch-lever-.html



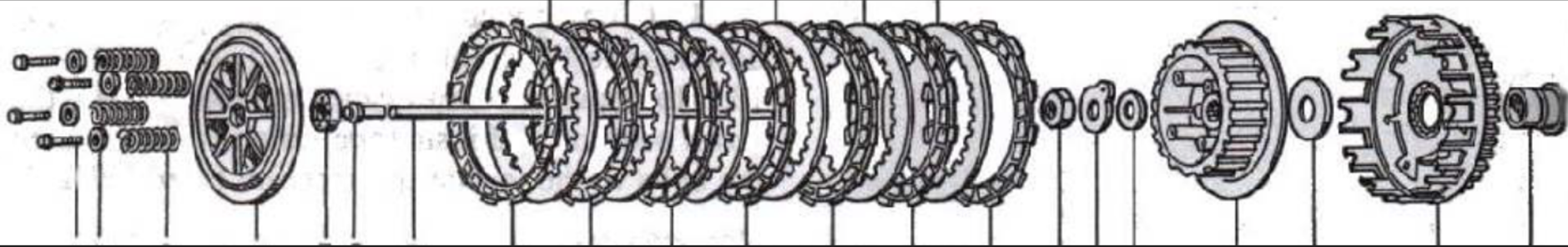
<https://theridingcenter.com/how-do-you-shift-motorcycle-gears/>



<https://www.youtube.com/watch?v=7hUlJSCv7SI>

What is the clutch?

A diagram of the clutch



Clutch
bolts and
springs

Pressure
plate

Clutch pack
With steel and friction plates

Inner hub/
inner basket

Outer basket

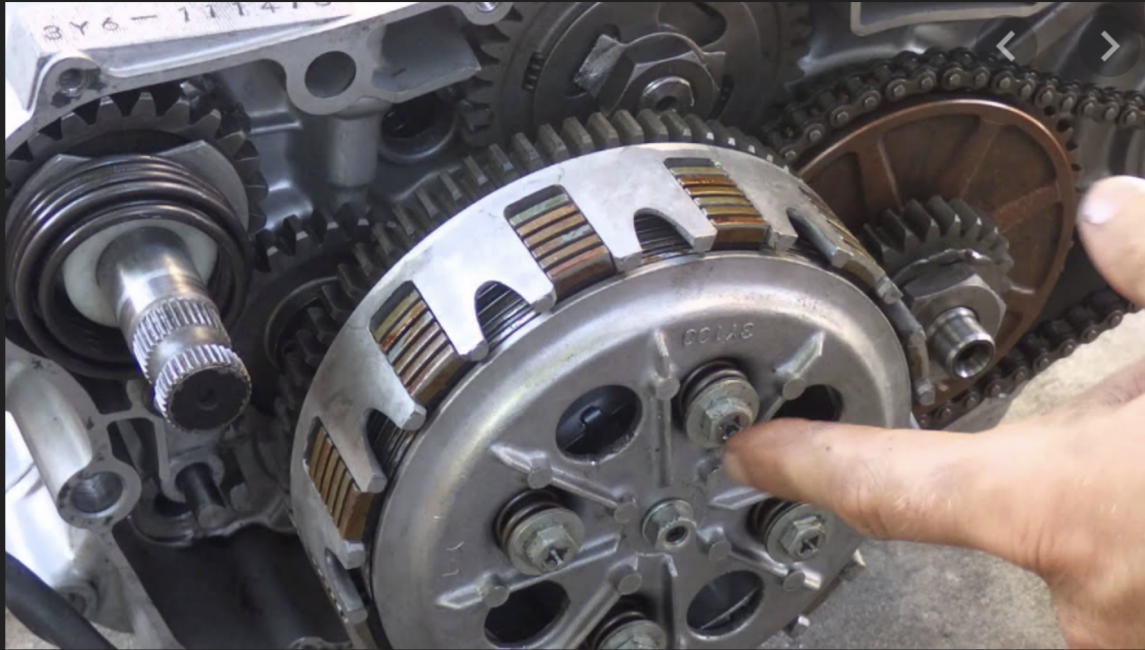
Forces everything together

- Steel plates
 - grooves on the inside
 - connect to the inner basket
- Friction plates
 - grooves on the outside
 - Connects to outerbasket

Connects to
the
transmission
input shaft

Connects to
and turns with
the crankshaft

How does it all connect?



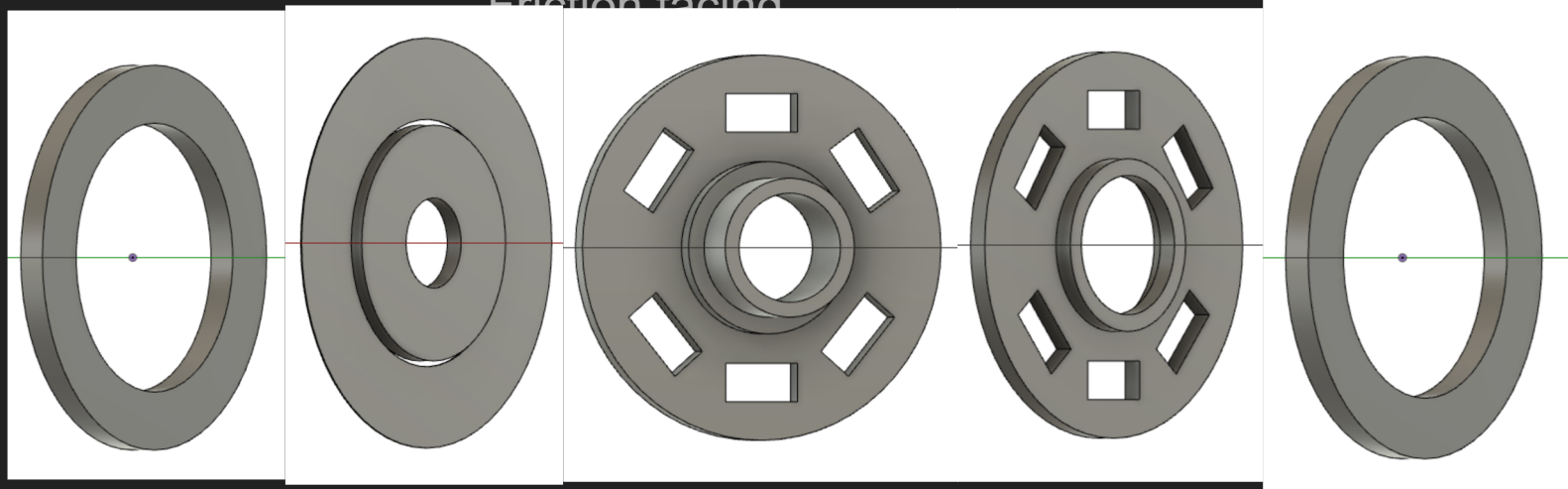
<https://www.youtube.com/watch?v=agLa0A8GAfc>

Comparison to Car Clutch -- Breakdown of the Clutch Disk

Friction facing

Hub

Friction facing



Clutch Plates

Option 1:

Small clutch, lots of plates
(most common)

Steel Plates



<https://motorcycleparts2u.com/vesrah-steel-clutch-plates-cs-419-971417-ad>

Option 2:

Large clutch, less plates

Friction Plates



<https://motorcycleparts2u.com/barnett-complete-clutch-kit-brntkit-0716>

Option 3:

Use different springs or
bolts to increase pressure
(rare)

Wet vs Dry Clutch

Wet

- ❖ Bathed in oil
 - Cools the clutch pack
- ❖ Easy to use
- ❖ Lasts longer
- ❖ Quieter
- ❖ Can take a lot of abuse
- ❖ Messier
- ❖ More common

Dry

- ❖ Avoids fluid drag
- ❖ More horsepower to rear wheel
- ❖ Cleaner oil
- ❖ Less clutch cooling
- ❖ More difficult to use
- ❖ Doesn't last as long
- ❖ Loud
- ❖ Used mostly in older models



THANK YOU!!!!!!!

<https://www.slideshare.net/ShirishGoel/clutch-66185801>

<https://www.youtube.com/watch?v=mxTSw3d5anE>

Rest of links are on slides where information/pictures are presented