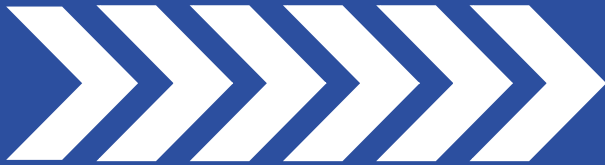


E-Z RIDER®

Heavy Duty Clutches
Made in the U.S.A.



Technical Hot Sheet

CLUTCH ASSEMBLY 101



- Basics •*
- Functions •*
- Major Components •*
- Types •*
- Specifications •*

For Immediate Assistance

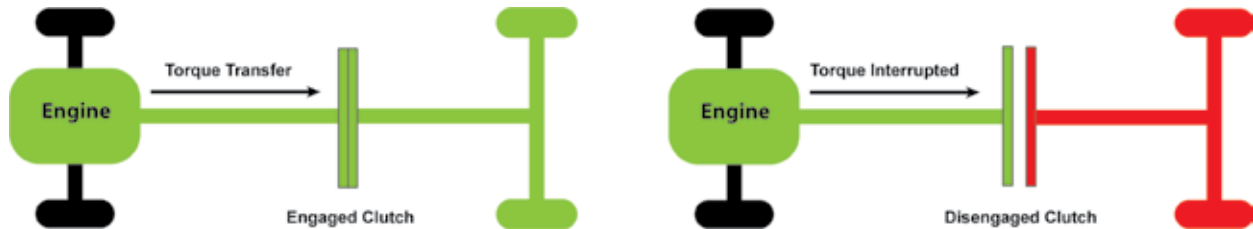
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24/7 TECHNICAL SUPPORT

CLUTCH ASSEMBLIES

What is a Clutch?

A clutch is a clamp that engages and disengages the torque transfer from the engine flywheel to the drivetrain.



3 Functions of a Clutch

Transmit Torque (Engaged)

Maintain the torque path from the engine to the drivetrain when you want the vehicle to move.

Interrupt Torque Transmission (Disengaged)

Interrupt the torque when you do not want the vehicle to move or when you want to change gears.

Isolator for Engine Vibrations (Engaged)

The clutch acts as an isolator for the drivetrain to protect it from damaging vibrations caused by the engine.

Major Components

Cover/Pressure Plate Assembly

- Applies pressure and clamping force to friction disc.
- Removes pressure and clamping force from friction disc.

Friction Disc

- Transmits torque through friction material.
- Isolates vibrations caused by engine through dampening springs.

Intermediate/Center Plate

- Multi-disc clutches only.
- Adds friction face for multiple friction discs.



CLUTCH ASSEMBLIES

Types of Clutches

What makes one clutch different from the next is how it releases and what it uses to apply clamping force.

When the driver uses the clutch pedal, the linkage system releases the clutch in one of two ways, either pulling the release bearing (Pull-Type) or pushing the release bearing (Push-Type).

The major difference in these is that the Pull-Type clutches have a fixed release bearing and the Push-Type do not.

The most common ways for a clutch to apply clamping force is through:

- Angle coil springs and levers
- Diaphragm spring
- Angle ring

Pull Type



Angle Coil
Spring & Levers



Diaphragm
Spring

Push Type



Angle Ring



Diaphragm
Spring

Clutch Specs

Clutches are rated by torque capacity. Torque capacity is calculated using **Plate Load**, **Friction Type**, **Number of Discs**, and the **Diameter** of the clutch disc. Changing any of these will increase or decrease the clutch's torque capacity.

- **Plate Load (lbs.)** - The amount of pressure applied to the friction disc by the cover/pressure plate assembly.
- **Friction Type** - This is the material on the friction discs. The most common types are organic and ceramic.
- **Number of Discs** - Clutch are most commonly single or dual disc.
- **Diameter (inch or mm)** - This is the size of the clutch disc.

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