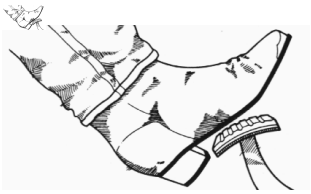

KEEP THOSE CLUTCHES ALIVE!

The major cause of clutch failure can be summarized with two words “EXCESSIVE HEAT”.

Extreme operating temperatures (excessive heat) can cause clutch to fail because the heat generated between the flywheel, driven discs, intermediate plate, and pressure plate are high enough to cause the metal to flow and the friction material to be destroyed.

Heat or wear is practically nonexistent when clutch is fully engaged. But, during moment of engagement (when the clutch is picking up the load) it generates considerable heat. An improperly adjusted clutch or slipping clutch will rapidly generate heat to self-destruct.

Helpful Tips for Clutch Preservation:

Always be sure the clutch pedal has at least 1 ½ inch of free play. The clutch needs adjustment if there is less than 1 ½” of free play from the top or bottom. Operating at and beyond these limits will result in clutch slippage.

Always start in the right gear! Starting a vehicle in a gear that is too high for the load will cause unnecessary slippage, resulting in excessive heat and wear. Generally, the highest gear that will start the vehicle moving with the engine at idle speed is correct. If the engine speed must be raised to prevent stalling, the gear is too high. After the clutch is fully engaged, the engine should be accelerated to near governed speed for the up-shift into the next gear.

Do not shift until vehicle has reached proper speed! Up shifting before the vehicle has reached the right speed is almost as bad as starting off in too high of a gear. When the difference between the vehicle speed and the engine speed is too great, the clutch is forced to slip. The result is extra heat and wear.

Do not ride or slip the clutch! Once a clutch is fully engaged, there is no heat generated and no wear. However, during the brief period when the clutch is picking up the torque of the engine, considerable heat is generated. Prolonging this period of partial engagement through riding or slipping the clutch unnecessary can cause excessive heat and wear. Keeping or resting a foot on the clutch pedal while the vehicle is running will cause the clutch to be partially disengaged, resulting in too much slipping.

Never hold a vehicle on a hill with the clutch! Using the clutch to hold a vehicle on an incline requires that the clutch be purposely and excessively slipped. This can generate enough heat to quickly burn up the clutch. Do not use the clutch as a brake.

Never coast with the clutch disengaged and transmission in gear! The excessively high rpm generated when coasting in gear with the clutch released can cause very dangerous clutch failure. In this situation, the rear wheel can drive the discs at over 10,000 rpms - well beyond the burst strength of the facing materials.

Engaging clutch while coasting! This procedure can result in tremendous shock loads and damage to the clutch, as well as the entire drivetrain

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Always try to minimize the slip time during clutch engagement be depressing and releasing the clutch pedal quickly, but not abruptly! Minimizing the slip time reduces heat and wear on the facings, increases clutch life and decreases the number of times the clutch needs to be adjusted.

Do not apply the clutch brake while moving! Using the clutch in this manner will shorten the life of the clutch brake. A worn-out clutch brake will also cause gear clashing in the transmission. The clutch brake is engaged during the last 1" of clutch pedal.

Always report unusual clutch operation promptly! Proper maintenance, performed on time, will greatly extend the life of a clutch, while a small problem unattended can quickly result in premature clutch failure and/or damage to the drivetrain.

The driver should report any change in free play, slippage or any strange feel to the clutch operation.