

Transfer Case and Off-Road Settings

This is a layman's attempt at an incomplete summary. Use at your own risk. The official MOPAR manual remains the definitive source for information

WARNING! Always engage the parking break when leaving the Jeep.

WARNING! Never leave the transfer case in N(EUTRAL). The Jeep will roll even when the transmission is in P(ARK) unless the parking brake is engaged.
{Exception: Flat Towing}

Transfer Case Drive Modes:

2H: Normal 2 Wheel Drive High speed mode for dry, hard surfaces. Rear wheels power the Jeep. Use at any speed. Power will be sent (via the rear differential) to the rear wheel with the least resistance.

4H Auto*. 4 Wheel Drive Automatic High speed mode. Use on **slippery pavement** (snow, heavy rain etc.) The Jeep will determine when to engage 4WD. Displays "**4H Auto**"; you can leave the Jeep in this setting for long periods of time.

Use at any speed. You're essentially in 2H unless the Jeep detects traction loss, and then it will automatically engage/disengage the front drive shaft to aid traction. Can provide faster acceleration than 2H because more tires may have power. **Shift into 4H Auto below 45 mph (you can be stopped) and while coasting.**

4H Part Time*. 4 Wheel Drive High speed mode. Displays "**4H Part Time**" meaning only leave the Jeep in this setting when needed. Both the front and rear drive shafts are always engaged. Only use on **slippery non-pavement surfaces** such as heavy snow with no pavement showing, gravel, dirt, mud, sand etc. Can be used at higher speeds. Driving 4H Part Time on pavement can increase tire wear and damage the system. Turning can be more difficult. **Shift into 4H Part Time below 45 mph (you can be stopped) and while coasting.**



N(EUTRAL). Both the front and rear driveshafts are disengaged. All four wheels will roll regardless of the transmission setting (Park, Drive etc). Used to transfer the Jeep into **4L** or for flat towing. It is very dangerous to leave the transfer case in NEUTRAL (unless flat towing) because setting the transmission to **PARK will do nothing to stop the Jeep from rolling. Hence the warning to always use the parking brake when exiting the Jeep as a backup to the transfer case and transmission settings.**

4L. 4 Wheel Drive Low speed mode. Displays “**4L**”. Maximizes torque to the front driveshaft. **Use below 25 mph** for the most torque, traction, and pulling power climbing over obstacles or for slow speed crawling. Turning will be more difficult. Driving in 4L on pavement will increase tire wear and damage the system.

Note: expect four times higher engine revolutions in 4L...**watch the tachometer and do not overspeed the engine.** 4L disables traction and electronic stability controls.

To shift into 4L:

- a. **Reduce speed to 1 - 3 mph (coasting)**
- b. **Shift the transmission into N(EUTRAL)**
- c. **Shift the transfer case from 4H Part Time, through N(EUTRAL) and into 4L.**

Buttons:

Off Road+: Enhances the Jeep’s throttle, engine, transmission, and traction control responses for 4WD scenarios. Recommend turning this on in 4H Part Time or 4L.



Sway Bar: When illuminated, the **front anti-sway bar is disconnected** meaning the Jeep can articulate further (the front wheels can rise and fall further) allowing a front wheel to climb (or drop into) an obstacle and perhaps gain traction it otherwise wouldn't reach. This also results in the Jeep body remaining more level on rough terrain and therefore having a more stable center of gravity. Use in difficult traction situations (anytime a front wheel could be in the air) or off-camber situations. Should definitely be off (anti-sway bar connected) when trying to jack up the front of the Jeep so the front tires can't fall as far. **Reconnect (light off) once unstuck, on hard surfaces, or above 18 mph. Off road use only; do not drive on main roads with the anti-sway bar disconnected.**

Locking Differential Buttons: (aka Lockers...4H Part Time or 4L only).



Note: With a differential locked, go easy on the throttle...you can over-torque and break something if you force power into a wheel that can't move.

Rear Only: Locks the rear differential so both rear wheels spin together. Useful when one rear wheel is in the air or is spinning. Normally the spinning wheel would get all of the power (and so you will go nowhere because it will spin), but locking the rear differential forces both rear tires to spin helping to move the Jeep. **Activate when less than 10 mph.**

Front + Rear:

Locks both the front and rear differentials meaning all four tires get power. The most traction and torque but turning will be more difficult because the tires can't spin independently. **Activate when less than 10 mph.**

The locking differentials should be used in a limited way to clear an obstacle. Turn off (unlock) by pressing the locker off button.



Traction Control System: Monitors the amount of wheel spin of each driven wheel. Tries to improve traction by applying brake to a spinning wheel. Can be turned off by a single press of the TCS OFF button on the climate cluster. Turning TCS off may help recover from a stuck situation, but should only be turned off when off-road. Automatically disabled in 4L.

Electronic Stability Control: Enhances directional control and stability. Corrects for oversteer or understeer by applying brakes to the proper wheel(s). Turning ESC off may help recover from a stuck situation, but should only be turned off when off-road. You can turn off ESC by holding the TCS OFF button for five seconds. Automatically disabled in 4L.

Select Speed Control. Only available in 4L. Think of this as slow speed cruise control. SSC controls the engine torque and brakes to help you crawl up or down difficult or slippery terrain. Press the SSC button on the climate cluster to engage when below 5 mph in 4L. Use the transmission shifter +/- to set the speed from 0.6 mph to 5 mph. Can be used with the anti-sway bar disconnect, the differential lockers, and even in REVERSE.

Recommended Configurations

Conditions	Transfer Case Mode	Differential Lockers	Off Road+	Anti-Sway Bar Disconnect	TCS/ESC	SSC
Normal Roads, Good Weather	2H	N/A	N/A	N/A	On	N/A
Heavy Rain; Snow with Pavement; Smooth Gravel	4H Auto	N/A	N/A	N/A	On	N/A
Heavy Snow No Pavement; Slippery Gravel; Mud; Dirt; Sand	4H Part Time	Rear available if OFF ROAD+ On	On	As needed to enhance front traction and reduce tipping	On unless stuck	N/A
Stuck; Slow Speed Obstacles; Crawling; Water Fording	4L	Both available; Use as needed to counteract wheel spin	On	As needed to enhance front traction and reduce tipping	N/A	As needed; Preferred

* 4H Auto is also referred to as 4H Full Time. Similar to All Wheel Drive in other vehicles. The Full Time vs. Part Time nomenclature can be confusing. Auto/Full Time means the Jeep is always ready to be in 4WD but often won't be; only when the Jeep thinks it needs it. Part Time means it is in 4WD and should only be in this mode in certain conditions. Think about it from the driver's point of view... do I want to leave the Jeep in 4WD all the time (4H Auto) but let the Jeep decide when to engage it? Or do I need 4WD now (4H Part Time) recognizing I can only leave it this mode Part Time and under certain conditions?