

DAIMLER

Detroit DT12™ Driving Tips in Inclement Weather



Detroit DT12™ Shift Operation in Winter Weather

- If Manual mode is disabled, then DT12 will automatically shift as a function of a defined shift map, which is not impacted by winter conditions.
- In Automatic mode, driver can still request a different gear by pushing or pulling on the shift lever. This will override the automatically selected gear. After 10 seconds, the automatic shift program will resume and may automatically shift, depending on conditions such as grade, throttle position, weight and speed.
- A lower gear can be requested while in automated mode and can then be held on a downgrade by maintaining a consistent RPM with light service brake application. If snubbing is required, generally the transmission will not shift if the RPM is kept below 2050.
- Light service brake will prevent activation of eCoast.
- eCoast events can only initiate once the vehicle first exceeds 31 mph and will not be able to initiate again once the vehicle is below 25.
- When ABS is active automatic shifts will not occur.
- When ATC is active automatic downshifts will not occur. Automatic upshifts will occur.
- When ATC is active, brakes will be applied to appropriate wheel(s) and engine torque will be reduced.
- After an ABS or ATC event, there is a time delay before automatic shifts will occur.

Wheel traction is very important when driving automated manual transmissions.

Driving Tip #1

The interaxle differential lock should be engaged when encountering snow covered terrain (before wheel spin is experienced), especially before pulling grades. Differential locks should be disengaged when descending a grade.

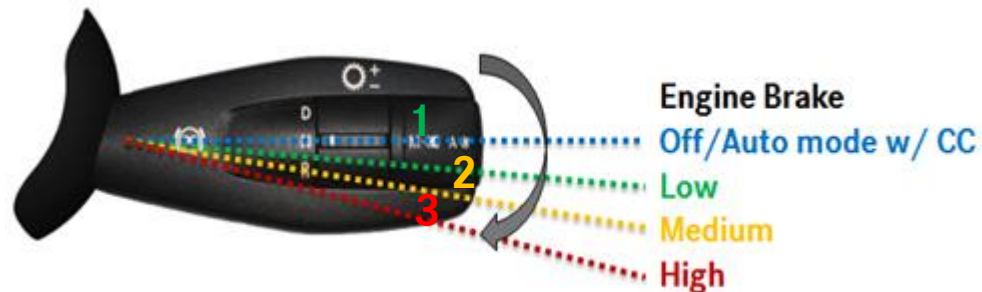
Driving Tip #2

Snow covered roads can best be traversed utilizing the foot pedal as "if" driving on ice, very slow throttle movements and part throttle operation. A partial throttle approach will minimize skip shifting with the DT12™.

Wheel traction is very important when driving automated manual transmissions.

Driving Tip #3

Engine brake use - It is best practice not to use engine brakes on slippery surfaces. DT12™ engine brakes can force a downshift(s) depending on the control stalk position when in automated mode. If engine braking is required in non-optimal road conditions, position 1 should be utilized along with the service brake. Please note that when utilizing Position 1 if the RPM's drop to a low enough level a downshift will occur. Position 2 could request a downshift based upon speed and application of the service brake. **Never use position 3** as it will downshift the transmission. ABS will disengage the engine brake as soon as wheel slip is detected and will reengage when traction is renewed.



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Driving Tip #4

Rocking the vehicle is acceptable to get out of a stuck situation. Pay close attention to any clutch overheat or abuse situations. ATC can be turned off in this scenario.



Launching Vehicle

This process should be very similar to operating a Manual transmission. Apply minimal throttle as to only get the vehicle moving to prevent wheel spin.

The auto select start gear may need to be upshifted by pulling on the shift lever before liftoff to minimize wheel spin or power delivered to the axles at part throttle. Utilizing “Creep Mode” is a great option in this type of scenario. It will get the vehicle moving with limited torque.

Flat Terrain

Best practice is to use light throttle and service brake input.

Automated mode will still select appropriate gear based upon defined shift map.

When ATC is active, brakes will be applied to appropriate wheel(s) and engine torque will be reduced.



“Creep Mode” is the best solution to get the vehicle moving, then apply light throttle.

In Automated mode, driver can still override the automatically selected gear. eCoast can only occur above 25 mph.

When ABS or ATC is active, automatic down shifts will not occur.

Climbing Grade

Apply only enough throttle to keep the vehicle moving at a safe speed.

Automated mode will still select appropriate gear based upon defined shift map.

When ATC is active, brakes will be applied to appropriate wheel(s) and engine torque will be reduced.



While maintaining a consistent speed, automatic shifts will be limited.

In automated mode the driver can still override the automatically selected gear.

When ATC is active automatic downshifts will not occur, automatic upshifts will occur.

Descending a Grade

Engine Brake not recommended.

Apply light service brake and snubbing as required.

When ABS is active, automatic downshift will not occur.



Use of Engine Brakes could request a downshift. If required use position 1 only.

Light service brake will prevent gaining momentum and prevent activation of eCoast. eCoast can only occur above 25 mph.

After a ABS event there is a time delay before automatic shifts occur.

Key Take Away

By learning and becoming comfortable with your vehicle during optimal road conditions, you become more comfortable and safe when operating a DT12™ in inclement weather.

Back Up

Winter Weather Best Practice

Rule #1:

The safe driver adjusts before he/she gets into trouble, not after.

Rule #2

Cruise control should not be used in inclement weather conditions.

Rule # 3

No matter a manual automated or manual transmission the driver is always in control, not the vehicle.

Rule #4

Maintain a slow safe speed.

Winter Weather Best Practice

Rule # 5

It may be advisable to engage the interaxle differential lock and differential lock(s) [if so equipped] before leaving the vehicle in preparation to restarting the trip. In colder ambient, the interaxle and differential locks may not engage in a timely manner after drive train components cool down.

Rule #6

When in doubt, find a safe spot to pull over immediately.