

Document ID: 3972883

#PIP5217A: Service 4 Wheel Drive Message After Flat/Dinghy Towing - (Aug 21, 2014)**Subject: Service 4 Wheel Drive Message After Flat/Dinghy Towing**

Models: 2014-2015 Chevrolet Silverado
2014-2015 GMC Sierra
2015 Chevrolet Suburban, Tahoe
2015 GMC Sierra, Yukon
2015 Cadillac Escalade
Equipped with NQH transfer case
2015 Chevrolet Colorado
2015 GMC Canyon
Equipped with NQ6 transfer case



This PI was superseded to update Vehicle Models. Please discard PIP5217

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition/Concern

Some customers may comment on a service 4wd message and the transfer case is stuck in neutral. This condition only occurs when the customer dinghy tows the vehicle or sets the vehicle up for dinghy towing and disconnects then reconnects the battery as outlined in the owner's manual. Technician will find a c0398 stored in the tccm (transfer case control module).

Recommendation/Instructions

Verify that the customer has dinghy towed the vehicle or set the vehicle up for dinghy towing as outlined in the owner's manual and then disconnected the battery with the transfer case in neutral. If the vehicle has a c0398 after this type of procedure clear the diagnostic trouble code and return the vehicle to the customer with a copy of this pi. An owner's manual supplement will be sent to owners to include steps 5.1 - 5.4. If a customer happens to call your dealership indicating that the transfer case is stuck in neutral after dinghy towing and cannot be shifted out of neutral accompanied with a service 4wd message in the DIC, the following sequence will restore transfer case shifting.

1. With the ignition in the RUN position and engine not running,
2. Open the hood and remove the 30 Amp TREC fuse in the under hood fuse block,
3. Reinstall the 30 amp fuse
4. Continue with "Shifting out of neutral" in the owner's manual.

Note: Removing the TREC fuse with the key on may cause additional messages to appear on the DIC including service stabilitrak. After the transfer case is shifted out of neutral turn the vehicle off, restart the vehicle and those messages should not reappear.

Only dinghy tow four-wheel-drive vehicles with a two-speed transfer case that have an N (Neutral) and a Four-Wheel Drive Low (4 (n) setting.

Warning: Shifting a four-wheel-drive vehicle's transfer case into N (Neutral) can cause the vehicle to roll even if the transmission is in P (Park). You or others could be injured. Set the parking brake before shifting the transfer case to N (Neutral).

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Follow these steps to dinghy tow:

1. Position the vehicle being towed behind the tow vehicle, facing forward and on a level surface.
 2. Securely attach the vehicle being towed to the tow vehicle.
 3. Apply the parking brake and start the engine.
 4. Shift the transfer case to N (Neutral). See "Shifting into N (Neutral)" under Four-Wheel Drive for the proper procedure. Check that the vehicle is in N (Neutral) by shifting the transmission to R (Reverse) and then to D (Drive). There should be no movement of the vehicle while shifting
 5. With the transmission in D (Drive), turn the ignition to ACC/ACCESSORY
 - 5.1. Shift transmission to P (Park) and turn ignition off.
 - 5.2: Wait 30 seconds before proceeding to the next step.
 - 5.3: Start the engine and shift transmission to D (Drive) verify that the transfer case is still in neutral.
 - 5.4: With the transmission in D (Drive), turn the ignition to ACC/ACCESSORY.
- Caution:** Failure to perform steps 5 through 5.4 exactly as outlined may cause the transfer case control module to set a diagnostic trouble code and will not allow further shifting of the transfer case which if in neutral will cause no vehicle movement.
- Caution:** Failure to disconnect the negative battery cable or to have it contact the terminals can cause damage to the vehicle.
6. Disconnect the negative battery cable at the battery and secure the nut and bolt. Cover the negative battery post with a non-conductive material to prevent any contact with the negative battery terminal.
 7. Shift the transmission to P (Park).

Caution: If the steering column is locked, vehicle damage may occur.
 8. Move the steering wheel to make sure the steering column is unlocked.
 9. Release the parking brake.
 10. Keep the ignition key in the towed vehicle in ACC/ACCESSORY to prevent the steering column from locking.

This information ONLY applies to vehicles setting this code immediately after reconnecting the battery after dinghy towing, any other vehicle setting a c0398 should be diagnosed using service information

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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Recreational Vehicle Towing

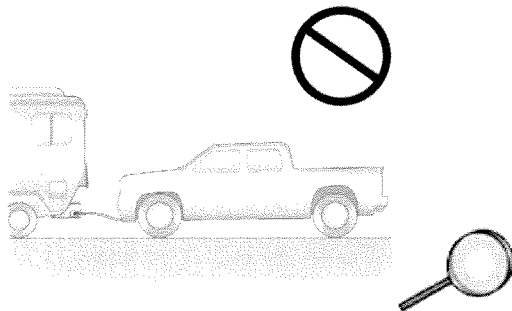
Recreational vehicle towing means towing the vehicle behind another vehicle, such as a motor home. The two most common types of recreational vehicle towing are dinghy and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels on a dolly.

Follow the tow vehicle manufacturer's instructions. See your dealer or trailering professional for additional advice and equipment recommendations.

Caution: Use of a shield mounted in front of the vehicle grille could restrict airflow and cause damage to the transmission. The repairs would not be covered by the vehicle warranty. If using a shield, only use one that attaches to the towing vehicle.

Dinghy Towing

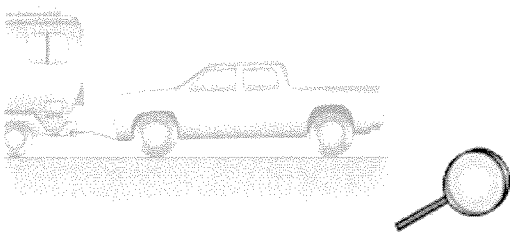
Two-Wheel-Drive Vehicles



Caution: If the two-wheel-drive vehicle is towed with all four wheels on the ground, the drivetrain components could be damaged. The repairs would not be covered by the vehicle warranty.

Two-wheel-drive vehicles should not be towed with all four wheels on the ground.

Four-Wheel-Drive Vehicles



Only dinghy tow four-wheel-drive vehicles that have an N (Neutral) and a Four-Wheel Drive Low (4 L) setting.

Warning: Shifting a four-wheel-drive vehicle's transfer case into N (Neutral) can cause the vehicle to roll even if the transmission is in P (Park). You or others could be injured. Set the parking brake before shifting the transfer case to N (Neutral).

To dinghy tow:

1. Position the vehicle being towed behind the tow vehicle, facing forward and on a level surface.
2. Securely attach the vehicle being towed to the tow vehicle.

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3. Apply the parking brake and start the engine.
4. Shift the transfer case to N (Neutral). See "Shifting into N (Neutral)" under Four-Wheel Drive. Check that the vehicle is in N (Neutral) by shifting the transmission to R (Reverse) and then to D (Drive). There should be no movement of the vehicle while shifting.
5. Shift the transmission into D (Drive). Turn the engine off. Then shift the transmission into P (Park).
6. Wait for at least 10 seconds, then restart the engine.
7. Shift the transmission to D (Drive), then turn the engine off again.

Caution: Failure to disconnect the negative battery cable or to have it contact the terminals can cause damage to the vehicle.
8. Disconnect the negative battery cable at the battery and secure the nut and bolt. Cover the negative battery post with a non-conductive material to prevent any contact with the negative battery terminal.
9. Shift the transmission to P (Park).

Caution: If the steering column is locked, vehicle damage may occur.
10. Move the steering wheel to make sure the steering column is unlocked.
11. With a foot on the brake pedal, release the parking brake. Keep the ignition key in the towed vehicle in ACC/ACCESSORY to prevent the steering column from locking.

Disconnecting the Towed Vehicle

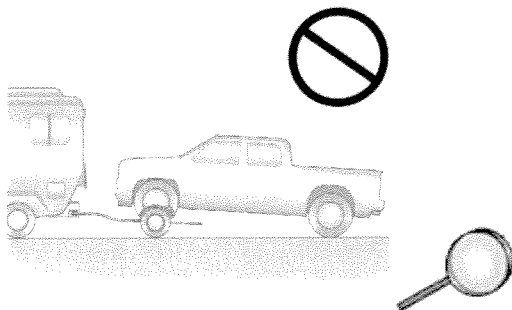
Before disconnecting the towed vehicle:

1. Park on a level surface.
2. Set the parking brake, then shift the transmission to P (Park), and move the ignition key to OFF.
3. Connect the battery.
4. Apply the brake pedal.
5. Shift the transfer case out of N (Neutral) to Two-Wheel Drive High. See "Shifting out of N (Neutral)" under Four-Wheel Drive. See your dealer if the transfer case cannot be shifted out of N (Neutral).
6. Check that the vehicle is in Two-Wheel Drive High by shifting the transmission to R (Reverse) and then to D (Drive). There should be movement of the vehicle while shifting.
7. Shift the transmission to P (Park) and turn off the ignition.
8. Disconnect the vehicle from the tow vehicle.
9. Release the parking brake.
10. Reset any lost presets.

The outside temperature display will default to 0 °C (32 °F) but will reset with normal usage.

Dolly Towing

Front Towing (Front Wheels Off the Ground) – Two-Wheel-Drive Vehicles

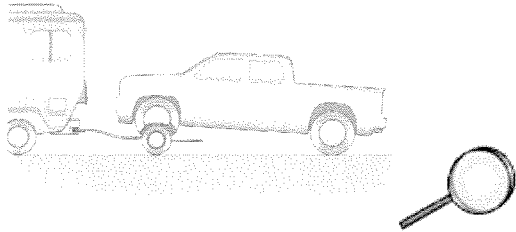


Caution: If a two-wheel-drive vehicle is towed with the rear wheels on the ground, the transmission could be damaged. The repairs would not be covered by the vehicle warranty. Never tow the vehicle with the rear wheels on the ground.

Two-wheel-drive vehicles should not be towed with the rear wheels on the ground. Two-wheel-drive transmissions have no provisions for internal lubrication while being towed.

To dolly tow a two-wheel-drive vehicle, the vehicle must be towed with the rear wheels on the dolly. See "Rear Towing (Rear Wheels Off the Ground)" later in this section.

Front Towing (Front Wheels Off the Ground) – Four-Wheel-Drive Vehicles



To dolly tow a four-wheel-drive vehicle from the front:

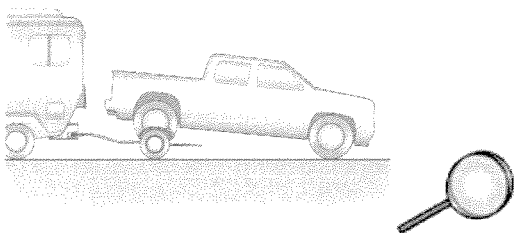
1. Attach the dolly to the tow vehicle following the dolly manufacturer's instructions.
2. Drive the front wheels onto the dolly.
3. Shift the transmission to P (Park).
4. Set the parking brake.

Warning: Shifting a four-wheel-drive vehicle's transfer case into N (Neutral) can cause the vehicle to roll even if the transmission is in P (Park). You or others could be injured. Set the parking brake before shifting the transfer case to N (Neutral).

5. Use a clamping device designed for towing to ensure that the front wheels are locked into the straight position.
6. Secure the vehicle to the dolly following the manufacturer's instructions.
7. Shift the transfer case to N (Neutral). See "Shifting into N (Neutral)" under [Four-Wheel Drive](#) for the proper procedure.
8. Release the parking brake only after the vehicle being towed is firmly attached to the tow vehicle.
9. Turn the ignition to LOCK/OFF.

Rear Towing (Rear Wheels Off the Ground)

Two-Wheel-Drive Vehicles



To dolly tow a two-wheel-drive vehicle from the rear:

1. Drive the rear wheels onto the dolly.

2. Set the parking brake. See [Parking Brake](#).
3. Put the transmission in P (Park).
4. Secure the vehicle to the dolly following the manufacturer's instructions.
5. Use a clamping device designed for towing to ensure that the front wheels are locked into the straight position.
6. Turn the ignition to LOCK/OFF.

Four-Wheel-Drive Vehicles

Warning: Shifting a four-wheel-drive vehicle's transfer case into N (Neutral) can cause the vehicle to roll even if the transmission is in P (Park). You or others could be injured. Set the parking brake before shifting the transfer case to N (Neutral).

To dolly tow a four-wheel-drive vehicle from the rear:

1. Drive the rear wheels onto the dolly.
2. Set the parking brake. See [Parking Brake](#).
3. Put the transmission in P (Park).
4. Secure the vehicle to the dolly following the manufacturer's instructions.
5. Use a clamping device designed for towing to ensure that the front wheels are locked into the straight position.
6. Shift the transfer case to N (Neutral). See "Shifting into N (Neutral)" under [Four-Wheel Drive](#) for the proper procedure.
7. Turn the ignition to LOCK/OFF.