



# TECHNICAL SERVICE BULLETIN

## G-FORCE BELT DRIVE SYSTEM

DON'T BREAK IT, BREAK IT IN.

BULLETIN TSB\_070\_US

PART NUMBER:

- All G-Force applications

### 1 INSTALL THE RIGHT BELT

- Choosing the right belt for your vehicle is critical for optimum performance.
- For vehicle belt identification, visit [Gates.com/GForce](https://www.gates.com/GForce).

### 2 PROPER BELT HANDLING

- Gates G-Force™ CVT belts are durable and offer long life when properly handled. However, caution must be used to avoid damaging the tensile cords. Excessive bending and twisting creates invisible crimps, which can lead to belt breakage. **Do not crimp, twist, backbend, invert, bundle or zip tie the belt.**



DO NOT BACKBEND



DO NOT CRIMP



SPACE BELT CLAMPS LESS THAN 5" (13 CM) OR A FIST WIDTH APART

### 3 CLEAN THE CLUTCHES

- Remove old belt residue, dirt, debris, and oils from the clutch sheaves with maroon Scotch-Brite®\* pads and alcohol or acetone poured or sprayed on a rag. **Do not spray onto the clutches and do not use brake cleaner.**



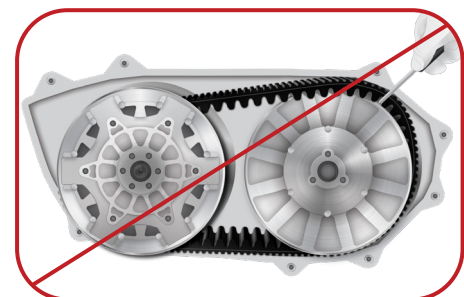
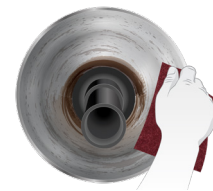
DO NOT FLATTEN BELT



DO NOT INVERT

### 4 INSTALL + BREAK IT IN

- Open the secondary clutch and install the new belt so it can be read right side up. **Do not pry on the new belt without opening the secondary clutch.**
- The goal of the break-in period is to properly wear in the belt to match the sheave angle before applying maximum engine torque. Perform a **HEAT CYCLE** with cover installed: Drive the unit in two wheel high, or the most modest driving mode, for 20 minutes between 25-45 mph (40-72 km/h) avoiding hard accelerations and hills. Flat terrain works best. After 20 minutes of driving, let the unit cool down for 30 minutes with the engine off. You may need to extend break-in time in extreme cold weather.
- Repeat the **HEAT CYCLE** for a second time and you have a well broken in belt. See next page for detailed instructions.



DO NOT PRY ON

\*SCOTCH-BRITE is a trademark of 3M Company.

## CVT BELT INSTALLATION BREAK-IN

To ensure optimal operation of newly installed belts, the CVT sheaves must be cleaned of all old belt residue, dirt, debris, and oils. Cleaning can be accomplished by carefully scuffing belt contaminants off the sheave/belt contact area with a mild abrasive such as a Scotch Brite®\* Pad. Follow up by cleaning the sheave surfaces thoroughly with alcohol or acetone until all impurities have been removed. **Cleaning the sheave surfaces until all contaminants have been removed is vital to future belt and CVT operation.** If any particles remain, belt slip and a noticeable drop in vehicle performance can occur. If a belt is to be removed and reinstalled during future maintenance, it is highly recommended that the belt is reinstalled in the same direction as before to match belt wear profile to contact with the corresponding sheave profile.



Although G-Force belts are not directionally biased, it is recommended to install them with the label lettering facing toward the user to keep belt reinstallation consistent.



DIRTY

CLEAN

Dirty sheaves (top) should be cleaned with a mild abrasive to remove rubber and other wear contaminants. Dark wear patterns must be removed from the surface then cleaned off with an alcohol agent or acetone to remove fine particles.

## NEW CVT BELT INSTALLATION AND BREAK-IN PROCESS

Proper installation and careful break-in of a new CVT belt are critical to maximizing belt life and performance.

### NEW CVT BELT INSTALLATION

Ensure you have chosen the right belt of the correct length for your vehicle. Proper installation of a new belt begins with cleaning the CVT sheaves of all old belt residue, debris, oils, dirt and other abrasive particles to provide a clean belt-sheave interface and ensure optimal operation of newly installed belts.

- 1 Make sure unit is in Park or Neutral and the engine is off. Remove the clutch cover.
- 2 Blow out the clutches and all inlet and outlet ports in the clutch box with compressed air, if possible, to remove dust, dirt, and debris. If the prior belt broke, carefully remove any belt cord from the primary and secondary clutch assemblies. Clear all inlets and outlets, especially the CVT exhaust port, of all clogging belt debris.
- 3 If possible, check for proper alignment by examining center-to-center distance between the primary and secondary clutches, referring to the vehicle OEM manual.
- 4 Clean the clutch sheaves by lightly scuffing the faces with a Scotch Brite® pad and wiping them clean with alcohol or acetone poured or sprayed on a rag - do not spray chemicals directly onto the clutches. Repeat until the clutch faces are completely cleaned and dried.
- 5 Open the secondary clutch as recommended by the OEM using the proper tools. Install the new belt so the lettering can be read right side up. Although G-Force belts are not directionally biased, it is recommended to install them with the label lettering facing toward the user to keep belt reinstallation consistent. DO NOT PRY ON THE NEW BELT. (Note: Always reinstall a belt in the same orientation as before to match the belt-wear profile with the corresponding sheave profile.)
- 6 Once installed, release tension on the secondary. Spin the secondary counter-clockwise until belt slack is taken up. With the clutch cover still off, start the unit up in Park and let it idle for 30 seconds. If the belt doesn't come to rest at idle, and the secondary does not stop spinning, then check your system for mis-alignment. On snowmobiles, you may need to adjust your deflection more than once.
- 7 If the CVT belt is stationary in Park and Neutral, reinstall the cover and proceed to the New CVT Belt Break-In Procedure.

### NEW CVT BELT BREAK-IN PROCEDURE

Taking the time to carefully break in a new CVT belt will result in a cooler-running belt with maximized life and performance. Perform the following HEAT CYCLES:

- 1 Drive the unit in two-wheel high for 20 minutes between 25-45 mph (40-72 km/h), avoiding hard accelerations and hills. Flat terrain works best. Vary vehicle speed and engine RPM to shift the belt through normal operational range but do not exceed  $\frac{3}{4}$  throttle during break-in. In extremely cold weather, extend the break-in time by 5-10 minutes to allow the belt to warm up optimally.
- 2 After 20 minutes of driving, let the unit cool down for 30 minutes with the engine OFF.
- 3 Repeat the HEAT CYCLE, turn the vehicle OFF and allow the belt to cool down again for 30 minutes.

\*SCOTCH-BRITE is a trademark of 3M Company.