**THE RIGHT GEAR—The New World of Transmission Technology**

**Automatic Transmission**
Invented by The Sturtevant Company, 1904

**Key Characteristics**
- Familiar, automatic operation—no shifting, no clutch
- Inefficient fluid-transfer design of the Torque Converter decreases fuel economy

An automatic transmission can change gear ratios without requiring the driver to shift gears while operating a clutch. A key component is the Torque Converter, which sits between the engine and the transmission. This fluid-based power-transfer mechanism allows the vehicle to sit still without stalling the engine.

*All Hyundai models, except 2016 Veloster/Turbo, offer traditional automatic transmissions.*

**Dual Clutch Transmission (DCT)**
First used by Porsche 956 and 962 Le Mans race cars, 1983

**Key Characteristics**
- Familiar, automatic operation—no shifting, no clutch
- Efficient, direct-mechanical operation saves fuel
- Can experience brief hesitation, under abrupt acceleration

A Dual Clutch is a manual type transmission that can be shifted automatically. It offers the best of both worlds—the convenience of an automatic and the fuel-efficiency of a manual.

**DCTs used on other products:**
- BMW M3
- HONDA FIT
- MERCEDES GLA
- PORSCHE CAYMANN

**Continuously Variable Transmission (CVT)**
First used by Subaru Justy, 1987

**Key Characteristics**
- Familiar, automatic operation—no shifting, no clutch
- Energy losses, due to friction, are greater with a CVT—about 5% to 15%. With normal gears it’s 2% to 5%
- Does not have gears or, normally, the shift-point feeling many drivers expect
- Can have a spongy, “rubber band” feel in response to accelerator input

No traditional gears. Instead of gears, there are two pulleys connected by a belt. To adjust to different vehicle speeds, the sizes of both pulleys are adjusted from small to large.

**CVTs used on other products:**
- LEXUS NX 300h
- NISSAN MURANO
- TOYOTA PRIUS