

Animation Worksheet: IVT Spherical Traction Drive

Name: _____ Date: _____

1. An Infinitely Variable Transmission (IVT) uses a spherical traction drive, also known as a _____, to achieve seamless speed ratio changes.
2. The _____ ring receives rotational power directly from the engine and uses traction contact to drive the spherical planets.
3. The adjusted torque is delivered to the driveline or vehicle load by the _____ ring.
4. The spherical planets in the variator are held together in place by a component called the _____.
5. Unlike traditional transmissions with metal gears grinding together, torque in this traction drive is transferred safely through a thin _____ film.
6. To achieve a 1:1 direct drive, the variator tilts the axes of the spherical planets into a _____ position relative to the transmission axis.
7. During overdrive, the input contact radius of the sphere is _____ than the output contact radius, which makes the output ring spin faster than the input.
8. Clutch brake 1 (CB1) and clutch brake 2 (CB2) are critical components used for power flow control and _____ selection.
9. When starting the vehicle in Drive mode, clutch brake _____ is applied to provide a lower gear ratio range.
10. When the transmission is shifted into _____, the system adjusts the angle and separation of the spherical planets to reverse the direction of the output.