

Animation Worksheet: Power Flow, ZF 9HP

Name: _____ **Date:** _____

1. The mechanical schematic shown in the animation charts the operational flow of the modern multi-speed automatic transmission known as the ZF _____.
2. According to the internal schematic layout, Gearsets 3 & 4 are structurally identified as a _____ gearset.
3. The lower green path on the diagram represents the input path, while the upper green section at the rear indicates the _____ path.
4. To modify planetary operation, the system uses holding devices attached to the outer casing called Brake D and _____.
5. Standard fluid-applied holding devices that engage rotating components together include Clutch E, Clutch B, and _____.
6. In addition to multi-plate friction clutches, this transmission uses specialized mechanical locking splines called Dog Clutch F and _____.
7. Based on the informational note at the bottom of the display, the sun gear for gearset 4 also serves directly as the _____ for gearset 3.
8. When tracking how power is routed, the line labeled as the _____ path reveals exactly which components transmit torque through the transmission gears.
9. To control the operational states of the multi-speed system, the transmission control module selectively commands the application of the internal clutches and _____.
10. The layout shows that Gearsets 1 & 2 are physically positioned closest to the front engine input side, making them the _____ gearsets in the mechanical sequence.