

# SWITCHBACK (SWB)

## Specialized Tools: Casing Cleaning Tools

The SWITCHBACK\* (SWB) casing cleaning tool is versatile and can be configured as a scraper, brush or mill. It can be run as an integral part of the BHA while drilling the final hole section multiple tools can be run in a single string that allows scraping, brushing, milling, or a combination of all three operations. While RIH and during drilling operations the component pads are recessed. Once drilling operations have reached TD the SWITCHBACK tool can be functioned by dropping a ball and applying pressure. As the ball shears through the tool the pads extend to begin the clean up operation.

### Features

- Modular design allows flexibility among scraping, brushing and milling modes
- High torque, rugged design for use in demanding applications
- Recessed blades that are RIH in dormant position
- Activated by ball-drop using patented ball seat technology
- Cleaning action in rotation, force exerted on casing ID by magnetic repulsion of pads
- Integral stabilizer to provide standoff – fluted design for maximized bypass
- Innovative pad retention mechanism
- Pads locked in dormant or engaged positions

### Applications

The SWITCHBACK unit can be utilized in situations where sand screens are being used, a packer setting area needs to be cleaned or while milling a perforation interval. By having the tool properly located in the drilling BHA, the targeted casing section can then be cleaned and prepared for the subsequent operation without making a dedicated cleanup trip.

### Advantages

- Saves a trip by allowing scraping, milling or brushing of lower completion packer setting areas during final hole section drilling
- The dormancy feature (pads recessed until activated) greatly reduces risk of pack-off around tool blades during drilling
- Patented ball seat technology enables multiple tools, all activated by the same ball, to be run in the same string saving rig time
- Disperses accumulated cuttings beds through a combination of hydraulic and mechanical actions, particularly when used with the WELL COMMANDER\* drilling valve
- Generous bypass flow area minimizes ECD increases

