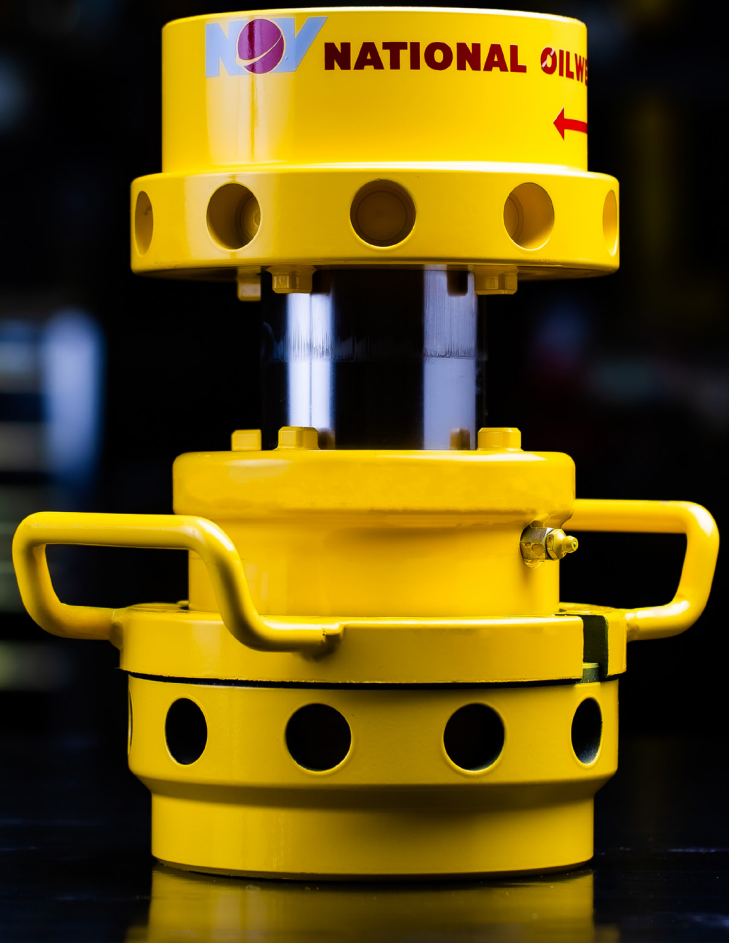


Mission Blak-JAK Washpipe 5000 PSI Cartridge System



Our new Mission Blak-JAK Washpipe Cartridge System is a self contained unit that is designed to be repacked on the rig floor, not at the swivel. Once the assembly has been repacked, the single cartridge can be installed in the swivel quickly just by tightening the nuts to the gooseneck and swivel. A spanner bar is utilized to tighten the nuts, eliminating the use of hammers. Since the packing does not rotate with the nuts on installation, most of the installation can be accomplished by hand. This cartridge is also 25% lighter than OEM designs to aid in maneuverability at the swivel and on the rig floor. Since the installation of washpipe packing is accomplished on the rig floor and not at the swivel, personnel time aloft is greatly reduced thereby promoting a safer workplace.

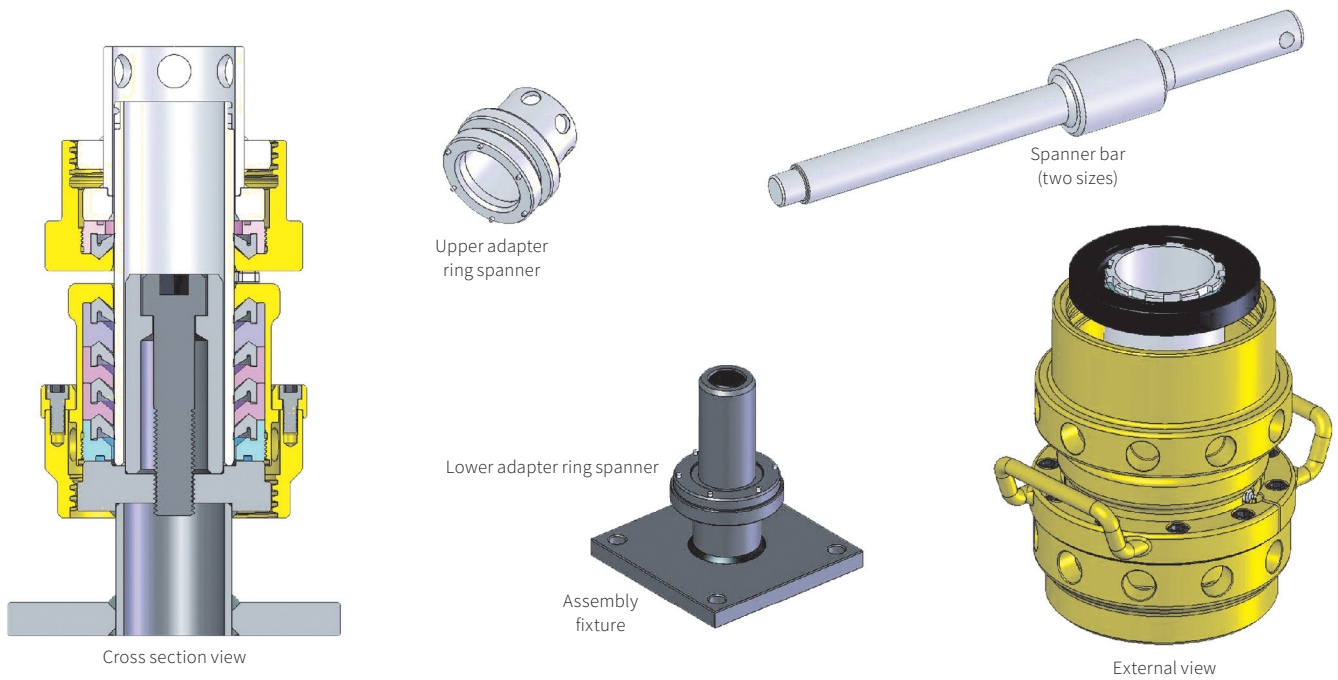
Assembly and repacking of the Mission Blak-JAK wash pipe cartridge is quick and simple. The washpipe assembly requires no external energizing device such as air or hydraulics to operate or disassemble the cartridge, as in other competing designs. Since the cartridge is designed to be repacked on the rig floor, an extra cartridge can be packed and utilized as a stand-by unit, further reducing downtime to a fraction of the time it takes to rebuild standard or competitive units.

The Mission Blak-JAK washpipe cartridge system utilizes the same washpipe and packing as the conventional washpipe assembly without any modifications. No modifications to the swivel or gooseneck are required to install the Mission Blak-JAK washpipe cartridge system and periodic lubrication requirements are identical to the OEM unit.

Features and Benefits

- Quick change cartridge system
- 25% lighter than competing designs for ease of maneuverability
- Cartridge assembly and disassembly is simple and quick
- Cartridge is repacked on the rig floor not at the swivel
- Utilizes standard packing and washpipe
- Eliminates the need for hammers
- Reduces personnel time aloft for a safer workplace

Mission Blak-JAK Washpipe Cartridge System



NOTE: Part numbers ending in "S" include the cartridge only; other part numbers contain tools as shown above.

Blak-JAK Washpipe Cartridge quick-reference guide

Manufacturer	Product number	Blak-JAK Washpipe Cartridge part number
National rotary swivels 5000 PSI	P-200	80506100 80506100S
	P-300	
	P-400	
	P-500	
	P-650	
National top drives - 5000 PSI, 3 in. washpipe	PS-350 PS-500 PS-500A	80506100 80506100S
	Varco top drives - 5000 PSI, 3 in. washpipe	TDS-9S TDS-10S TDS-11S
Varco top drives - 5000 PSI, 3 in. washpipe	TDS-3S TDS-4S TDS-6S	80506100 80506100S
Canrig top drives - 5000 PSI, 3 in. ID washpipe	1050E-500	80506102 80506102S
	6027E-938	
	8035E-500	
	1165E-712	
Oilwell rotary swivels - 5000 PSI	PC225	80506101 80506101S
	PC300	
	PC425	
	PC500	
	PC650	
LEWCO	DDTD500	80506100 80506100S
BPM (Beijing Petroleum Machinery)	DQ70BSC (Chinese copy of Varco TDS11)	80506100 80506100S
	Emsco	LB400
LB500		
LB650		