



CleanReam™ Premium Casing Reaming Shoe

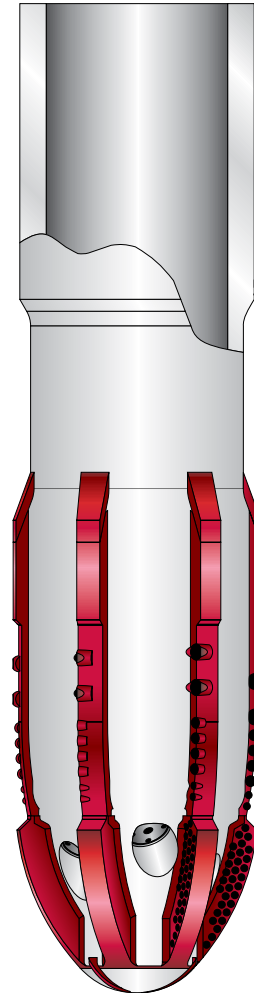
Weatherford's *CleanReam* premium casing reaming shoe is designed to reduce reaming time during liner or casing installations. It is especially advantageous where the likelihood of hole problems is high. The nose structure and external gauge, for example, are designed to avoid the potential of sidetracking in soft formations. The concentric nose features six aluminum blades dressed with thermally stable polycrystalline (TSP) diamond cutters. The tool is also fitted with interchangeable nozzles to increase the flow penetration and enhance hole and blade cleaning.

Applications

- Liner reaming
- Casing reaming

Features, Advantages and Benefits

- The combination of a six-bladed concentric nose and nozzle configuration enhances reaming and hole-cleaning capabilities to save time and costs and increase efficiency.
- External-gauge polycrystalline diamond cutters (PDC) provide an aggressive cutting structure for reaming through tight spots. The nose can penetrate restrictions in the wellbore deeply enough to expose the PDCs and transfer the reaming action to the external gauge. This design prolongs the life of the reaming shoe and increases rate of penetration.
- The backreaming capability, which allows for both upward and downward reaming through tight sections, is especially advantageous before a new connection is made, ensuring that casing is free to move when the next joint of casing is run.
- Several design elements of the aluminum nose and nozzles facilitate drilling and minimize post-drillout debris:
 - Interchangeable nozzles are available for hydraulic optimization. Copper nozzles are fitted as standard. If long periods of reaming at high flow rates are predicted, the standard nozzles can be upgraded with ceramic nozzles.
 - The nose and nozzles are PDC or rock-bit drillable.
 - The drillable nose has an internal guiding profile to center the drill bit upon entry.





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Specifications

Nominal size (in.)	7 × 8-1/4
Legacy part number	CR-070082
Drilling diameter (in./mm)	8-1/4 209.6
Maximum tool body OD (in./mm)	8.25 209.55
Casing size (in.)	7
Casing weight (lb/ft)	26.0 to 32.0
Connection	As requested
Blank connection length (in./mm)	9.85 250.19
Casing ID	To API 5CT
Casing drift	To API 5CT
Tool ID below casing connection (in./mm)	6.039 153.4
Tool length (ft/m)	2.75 0.837
Tool weight (lb/kg)	412.5 187.5
Number of blades	6

Nominal size (in.)	7 × 8-1/4	
Legacy part number	CR-070082	
Cutting structure	PDC, TSP, HVOF	
Face cutter ^a diameter (in./mm)	0.35 9	0.24 6
Face cutter quantity	24	12
Gauge cutter ^a diameter (in./mm)	0.51 13	
Gauge cutter quantity	12	
Near-bit gauge length (in./mm)	2.587 65.7	
Gauge protection	Tungsten carbide briquettes	
Number of nozzles	6	
Maximum total flow area, drilling nozzles	Dependent on nozzle selection	
Junk slot area (in. ² /cm ²)	7.30 47.06	
Face volume (in. ³ /cm ³) ^b	102.4 1,678	
Body material	API Grade P110	
Nose material	Aluminum alloy	

^aNon-premium, PDC

^bApproximate total volume between blades (six) and up to the start of the stabilizer gauge length. On the nose, the cutting ID is measured at the first TSP cutter.