



ABEL RAMLOC CONNECTOR™

NORTHERN OILFIELD SERVICES

Marking over 140 years of combined experience as leading providers of innovative drill-bit technology and exceptional Wellhead and valve service, sales and rentals to our clients in the Bakken.

The ABEL RamLoc Connector® has redundant systems to ensure reliability, and safeguards to protect personnel, property and the environment with:

- Dual Redundant air/liquid pumps for tool operating and testing (with hand pump back up)
- Stored energy (air and hydraulic) that operates 12 cycles without re-charge
- LOCKOUT: a safety feature that will work with or without hydraulic power. It engages mechanically when the ram travels to the closed position, making sure to prevent inadvertent opening.
- Analog SHUTOFF Tool prevents opening if there is wellhead > 30 psi
- Simple intuitive operational panel design

FULL FRAC SPREADS AVAILABLE

GREASELESS FRAC STACKS	SCREEN OUT IRON PACKAGE AND LABOR
VERSA TRACK OR ZIPPER MANIFOLD	PUMP DOWN AND BACKSIDE PRESSURE EQUIPMENT
MISSILE POD SYSTEMS	UNBEATABLE SERVICE

For more information or to schedule a consultation, contact us online or by phone today.

WHAT WE DO

Founded in 2017, Northern Oilfield Services provides integrated manufacturing, repair, remanufacturing, and operational services for drilling equipment, oilfield wellhead equipment, and valves that meet and exceed all standards and regulations.

ABEL RAMLOC CONNECTOR

A Fast and Secure means to connect to the wellhead to perform wireline and other well interventions.

The ABEL RamLoc Connector® is a quick on/off tool to remotely and safely connect pressure-control equipment to the wellhead during fracking, wireline, coil tubing, pumping (or flowback) and/or snubbing operations.

The ABEL RamLoc Connector® is a selfsupporting tool that will connect to the wellhead in 2- seconds, and conduct tests in 45 seconds after landing. Opens in 1 second for disengagement. The tool can support multiple wells on location.

Side load capability

Calcs available upon request; Axial: 500k without bending, 300k with sideload

Latch mechanism

hydraulic operated rams of 4140
120ksi yield 800kips shear each block
1,600,000 lbs pull capacity

One ram closed

Meets API 15k SF; Hydrotested to 15k
in acceptance test Unit 1

Open time

Open (LOCKOUT disengage + Open
at 15C) = 2 secs

Seal Port Test time

45 seconds from zero to
10,000 psi / 90 seconds zero to 15,000 psi

Lock visual confirmation

Cylinder rod is flush when closed and seen
(yellow on black background) visually

SHUTOFF tool verification

Testing manifold provided on tool for
flushing WHP supply to SHUTOFF; Shell
testing and proof of function offline

Panel open mechanics

Requires two hands (left to hold and disengage
LOCKOUT right to operate 4-way handle)

Seals mounted inside hold-down

Dual Parker polypac-B Hydrogenated
Nitrile seals interfaces to colmonoy #5
hard faced seal areas on mandrels

Panel design

Simple and straightforward with triple redundancy for
accumulator and test circuits (2x air pumps 1x
hand pump both accumulator and test) designed per
API 16D BOP control. Sensors are Nicad batteries
do not require power supply

Test stand

Test shipping stand for tool for offline testing in the field

Turn-a-round

Make ready after a 25 day job will take 4 hours
(checks and top up of oil, etc.) Can be made ready in
field does not require return to base

ID/WP

Up to 5-1/8" 15k with 30,000 psi proof
of design/concept test

ID/WP

6x features prevent inadvertent operations:

1. LOCKOUT lock rams in closed position mechanically
2. LOCKOUT must be opened hydraulically (two hand operation on panel)
3. SHUTOFF: an analog system that blocks open pressure if WHP > 30 psi
4. Seal testing upon landing (seal is assured/tested/monitored) up to 15ksi
5. Position of rams displayed on the panel (like choke operations)
6. Open tool required two hand operation

Close time

Close (at 15C) = 1 second

Locking securityClose time

LOCKOUT in each cylinder where lugs land
in a race and one cannot retract until
hydraulically disengaged

SHUTOFF analog safety to prevent opening

WHP > 30 psi operates a needle valve in the
cylinder open circuit (open pressure will
not open cylinder in presence of WHP)
Analog design work without power

Seal test

Test to 15k via test pump between seals after
landing (Like quick test sub), time to 10k is
45 sec to 15k is 100 sec

Seal port monitoring

After test seal port is monitored to know if seal
failure gauge resolution 0.5% of display pressure 1 psi

WHP and Seal Port gauge

20k electronic gauges and back up
analog on test pressure

Accumulator

Can open/close 6x times without accumulator recharge
main air pump with 1x air and 1x hand back up

Ram engagement display

Linear position indicator displays as percent open
or closed and pressure indication

Equipment Spread

Panel hose basket with crash frame for storage/moving Air
compress or skid with crash frame; Test/Transport skid for tool;
Mandrel Shipping Skid with tool storage

Atmospheric ball launcher

1.25 to 2.60" Balls with 12-ball magnize air operated from panel