

TENSILE SHEAR SUB / BHA COMPONENT

A planned disconnect for a stuck BHA.

A sub that parts at a set tensile load. If the bit or BHA is stuck and can't be recovered, pull to the set load and the string separates at a known point.

5.5" & 6⁵/₈"

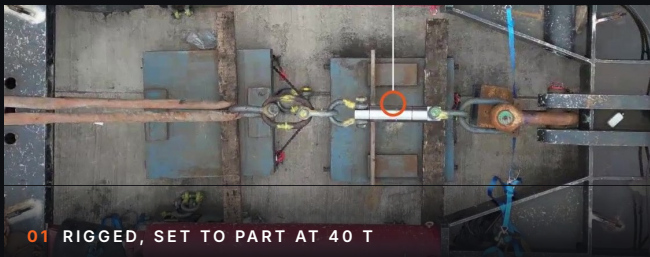
STANDARD CONFIGURATIONS

40_t

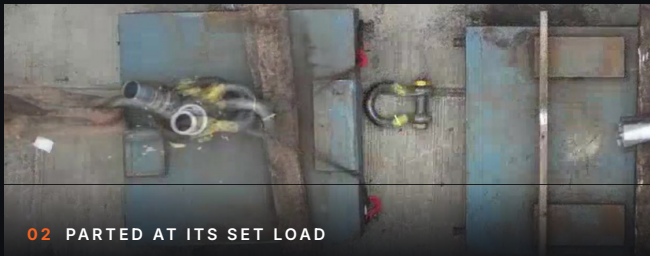
STANDARD SET LOAD, 5.5"

2

TRIGGER OPTIONS



01 RIGGED, SET TO PART AT 40 T



02 PARTED AT ITS SET LOAD

TENSILE SHEAR SUB / PULL TEST TO DESTRUCTION

The shear mechanism is the proven part. Pulled in a tensile test rig, the sub separates cleanly at its set load. The same mechanism has been used offshore in deep-water geotechnical work.

WHEN IT IS USED

The bit or BHA is stuck and can't be freed, often with the weather closing in. The crew follows the approved procedure, applies the set load and the string separates at the sub.

01 / NO CHANGE TO YOUR BHA

Replaces an existing spacer sub.

Length is made to match the spacer sub it replaces, so coring tool lengths and latch positions stay as they are.

02 / NO SHEARS OR CUTTING

Nothing extra to deploy.

Removes the need for template-mounted subsea shears, deck cutting or downhole internal cutters to free a stuck string.

03 / KNOWN BREAK POINT

You know where it parts.

Fitted behind the bit, it separates at the sub, at its set load. You lose the bit and BHA below it and recover the rest of the string.

04 / REPEATABLE

Accurate separation load.

Individually fitted, interfering shear pins and load-ring segments share the load evenly. After a shear event the pins are replaced and the sub goes back into service.

SUPPLIED WITH THE MATCHING RATCHET VALVE SYSTEM

We supply the ratchet valve system for your passive heave compensator. It gives controlled overpull up to the set load without using high-pressure air to overcharge the compensator, and it can be retrofitted to an existing rig.

Configured to your string.

Standard in 5.5" and 6 5/8" configurations. Other sizes, set loads and lengths are available - we work to your requirements.

5.5" STANDARD CONFIGURATION

Connection	5.5" FH API drill pipe.
Set load	40 t (+20%). Other set loads to order.
Length	Made to match the spacer sub it replaces.
Working string torque	15 kN·m.
Make-up torque	45.3 kN·m (33,410 ft·lb).
Max operating temperature	300 °C.
Internal mud pressure	210 bar limiting.
Trigger	Overpull via our ratchet valve system (no high-pressure air), or pressure-triggered version.
After a shear event	Pins removed with a dedicated torque tool and replaced.
Other sizes	6 5/8" standard; others to order. Data on request.



GEOTECHNICAL DRILLING

A tensile release designed for geotechnical BHAs, not a torsional oil and gas shear sub.

Limits: the sub carries BHA self-weight and drilling loads. It is not a lifting or suspended-load component. Set load, length and trigger method are confirmed for each application.

TRIGGERING

Overpull or pressure.

- **Ratchet valve system** - supplied by us with the sub. Controlled overpull across the passive heave compensator, with no high-pressure air. Can be retrofitted.
- **Compensator overcharge** - the conventional high-pressure air method, where the rig suits it.
- **Pressure-triggered** - for rigs without the overpull capacity to reach the set load.
- **Staged set loads** - more than one sub in the string, each parting at a different load.

SUPPLY & SUPPORT

Buy or hire.

- **Procedure and training** - an approved operating procedure, with crew training.
- **Spares** - we hold the design, tooling and critical spares.
- **End-of-service testing** - spectroscopy and pull testing to re-rate capacity and extend service life.
- **Supply** - outright purchase, or hire for a campaign.

Send us your BHA layout.

Tell us the string size, spacer sub and heave compensator. We'll configure the sub and ratchet valve to suit.

hello@mintmech.com / +44 1326 369469 / mintmech.com

Kernick Industrial Estate, Penryn, Cornwall TR10 9EP

Tensile Shear Sub / 2 of 2