



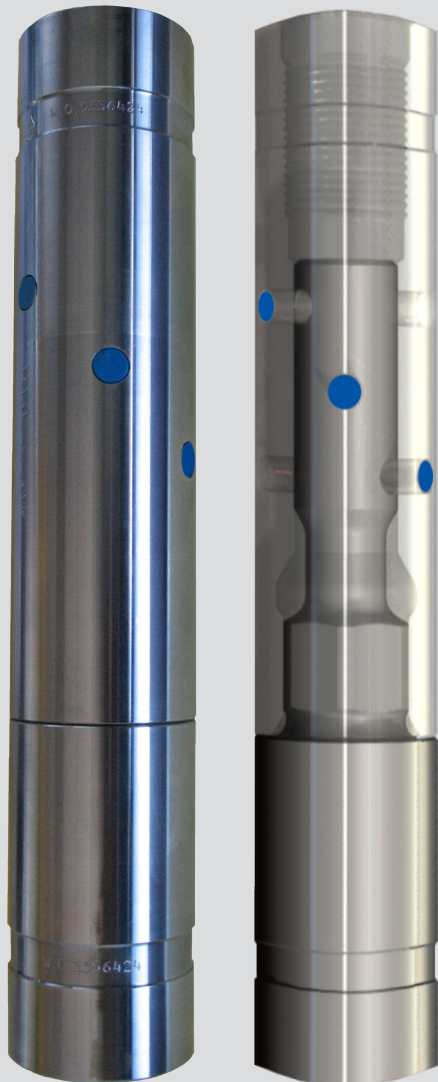
# ToughTorq™ Shear Coupling

## Ideal For PC Pump Applications In Problem Wells

The ToughTorq™ Shear Coupling† has been specially designed for use with high torque rod applications such as Weatherford® T66/XD and HD sucker rods and Alberta Oil Tool Drive Rods®††.

Shear couplings are used to reliably separate the rod string from the bottom hole assembly when the pump seizes or the rod gets stuck. This prevents the costly and environmentally unfriendly process of pulling tubing and rods out simultaneously.

The ToughTorq™ Shear Coupling has an increased resistance to fatigue in horizontal and deviated wells. With the integral ToughTorq™ key, it is ideal for reciprocating and rotating rod applications as well as continuous and conventional sucker rods.



### Features

- Improved internal torque transmitting key design
- Enhanced flexibility
- Improved material toughness using a proprietary Ni-Cr-Mo alloy
- Reduced stress distribution around shear pins
- Improved surface treatment around high stress areas
- Ideal for vertical, horizontal and deviated wells
- Box-by-box construction
- Threads are formed (cold rolled), not cut, conforming to API 11B
- Precisely calibrated shear pin values
- ISO 9001 ensures full material and manufacturing traceability
- Slim hole diameter

† Patent pending.

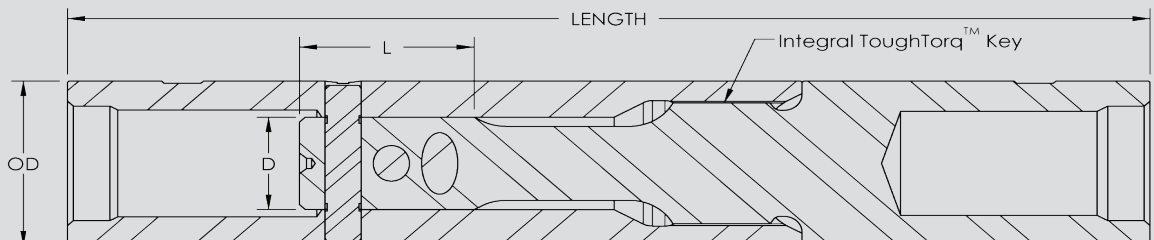
†† Weatherford and Alberta Oil Tool are in no way affiliated with Plainsman Mfg. Inc.

# TOUGHTORQ™ SHEAR COUPLING



SIZE <sup>1</sup> (IN)	OD (IN)	LENGTH <sup>3</sup> (IN)	SHEAR STRENGTH (LB)	"L" <sup>2,4</sup> (IN)	"D" <sup>2,4</sup> (IN)	MAXIMUM ALLOWABLE STATIC TORQUE (LB-FT) <sup>2</sup>	PINS	
							#	COLOUR
7/8 (22 mm)	1.63 (41 mm)	10.45 (265 mm)	26,000 LBF (116 kN)	1.80	1.13	1250 LB-FT (1695 N·m)	2	Blue
			30,000 LBF (133 kN)	1.80	1.13		2	White
			35,000 LBF (156 kN)	1.80	1.13		3	White & Black
			40,000 LBF (178 kN)	1.80	1.13		3	Blue
			45,000 LBF (200 kN)	1.80	1.13		3	White
1 (25 mm)	2.00 (51 mm)	11.20 (284 mm)	26,000 LBF (116 kN)	1.80	1.13	2,500 LB-FT (3,390 N·m)	2	Blue
			30,000 LBF (133 kN)	1.80	1.13		2	White
			35,000 LBF (156 kN)	1.80	1.13		3	White & Black
			40,000 LBF (178 kN)	1.80	1.13		3	Blue
			45,000 LBF (200 kN)	1.80	1.13		3	White
		11.7 (297 mm)	50,000 LBF (222 kN)	2.30	1.13		4	Blue & Yellow
			60,000 LBF (266 kN)	2.30	1.13		4	White
1-1/8 (28 mm)	2.25 (57 mm)	13.6 (345 mm)	30,000 LBF (133 kN)	2.45	1.50	3,750 LB-FT (5,080 N·m)	3	Red & Yellow
			35,000 LBF (156 kN)	2.45	1.50		3	White & Black
			40,000 LBF (178 kN)	2.45	1.50		3	Blue
			45,000 LBF (200 kN)	2.45	1.50		3	White
			50,000 LBF (222 kN)	2.45	1.50		4	Blue & Yellow
			60,000 LBF (266 kN)	2.45	1.50		4	White

1. Other sizes available, please contact Plainsman
2. To maximize fatigue life, Plainsman recommends using a .8 service factor
3. No additional coupling is needed
4. Customer-driven request for well fishing applications



MADE IN CANADA



## Make-up Procedure:

Follow recommended make-up procedure of rod manufacturer for sucker rod grade being used. The ToughTorq™ Shear Coupling is compatible with all sucker rod grades.

For torsional applications, install at least one rod length above the bottom hole pump. Using centralizing couplings on either side of the shear is recommended.

## Coatings

Plainsman provides two\* coating options to prolong the life of the ToughTorq™ Shear Coupling that is available separately or in combination.

CODE	NAME	DETAILS
CT1	HardCoat™	For severe downhole wear/fatigue conditions. This coating case hardens the shear coupling's keyway and external surface without affecting the base metal, improving wear resistance and increasing the shear's life. For easy identification, shears are stamped CT1 and labelled prior to shipping.
CT2	SoftCoat™	For combating abrasion between shear coupling and tubing. Recommended when the tubing has not been hardened. A soft urethane is bonded to the outside of the shear coupling, preventing abrasive particles, like sand, from wearing the interface between the tubing and shear coupling.

\* Other coatings may be available upon request: contact Plainsman.

