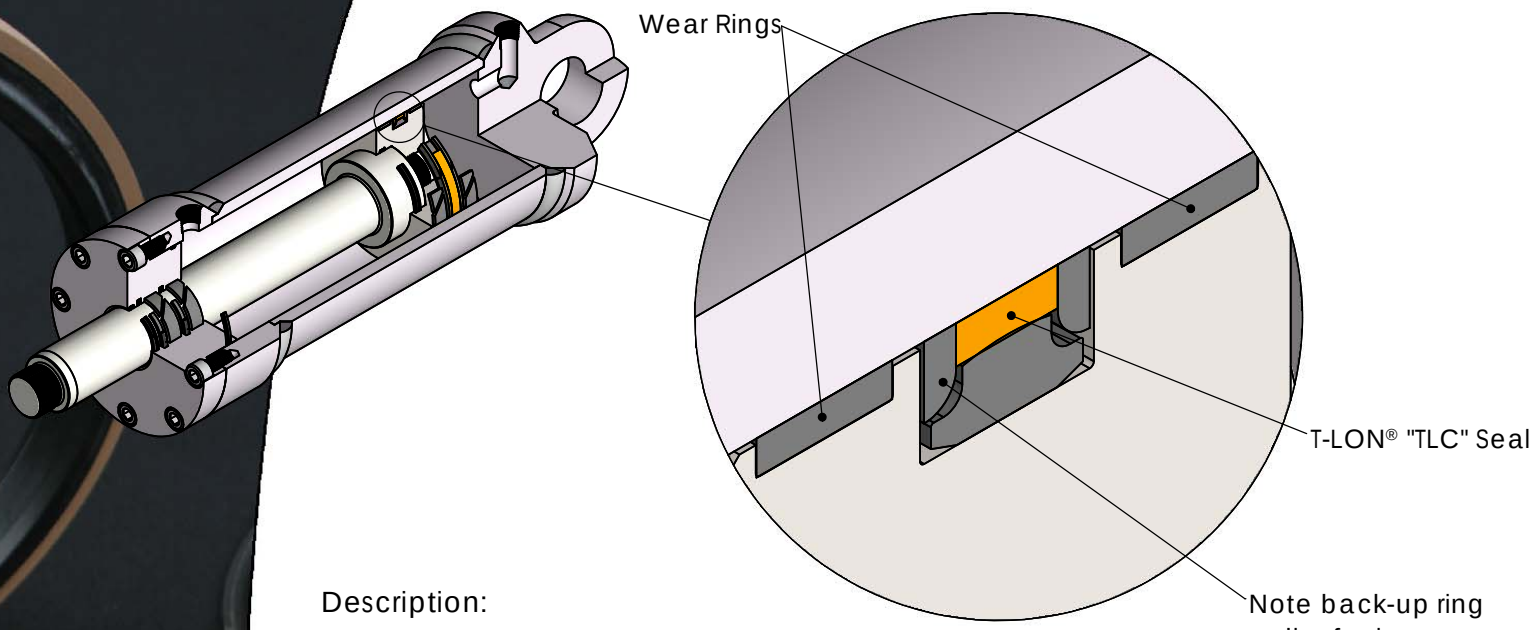
T-LON® "TLC" Series Piston Seal



Description:

For over a decade, T-LON® Products has supplied the TLC hydraulic piston seal to use in the Caterpillar® Type 4 piston seal groove. It is a proven reliable seal for both low and high pressure systems.

The TLC seal is a double-acting filled T-LON® PTFE compound with a T-shaped elastomer energizer and two high compressive strength nylon back-up rings designed for extreme pressures in reciprocating applications. The filled PTFE seal ring is manufactured with an interference fit with the bore and optimum compression with the T-shaped energizer. This offers excellent sealability at low pressures and high pressures when the cylinder experiences ballooning. The two **back-up rings must be installed with the inner radius facing the center of the seal** and are designed assymetrical to prevent loader damage during the life of the seal.

Advantages:

- Low seal drag/friction (Minimize energy loss)
- No Stick-slip (Smooth Operation)
- Long seal life from T-LON® filled PTFE compounds
- Available for cylinders up to 45" diameter

Applications:

- Caterpillar® Hydraulic Cylinders

NATIONAL FLUID POWER ASSOCIATION NFPA MEMBER

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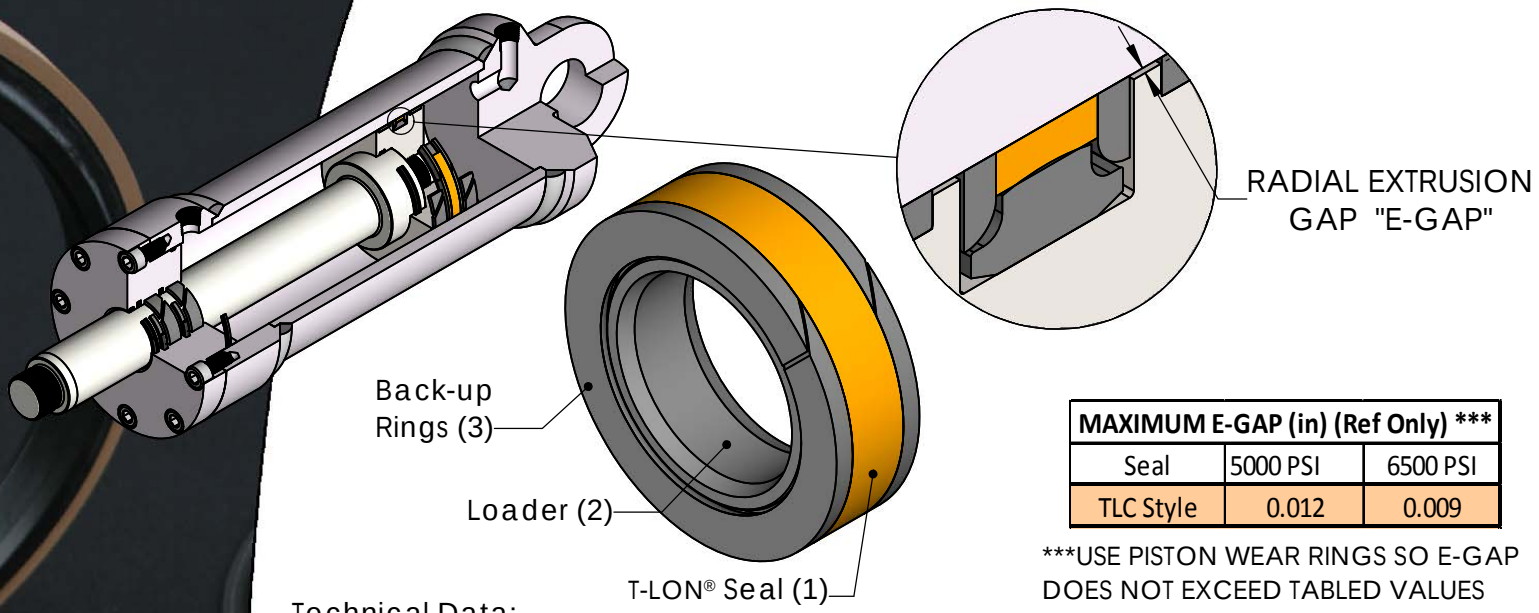

MAXIMUM E-GAP (in) (Ref Only) ***		
Seal	5000 PSI	6500 PSI
TLC Style	0.012	0.009

***USE PISTON WEAR RINGS SO E-GAP DOES NOT EXCEED TABLED VALUES

Technical Data:

(1) **T-LON® seal compound** determines velocity and seal life
- Velocity: Up to 5 ft/s
- Pressure: Up to 10,000 psi

(Function of e-gap and T-LON® compound. Max velocity and pressure cannot be used together)

Most Common:

BRONZE FILLED PTFE ("21")
- Highest Extrusion Resistance (Higher bronze content increases extrusion/wear resistance)
- Good sealability

GLASS/MoS2 FILLED PTFE ("31")
- Good wear resistance for tubes with rougher surface finish
- More chemical resistant and used in applications when seal could run dry

(2) **Loader compound** determines temperature and chemical compatibility

Most Common:

NBR SHORE 70 A
- Working Temp. Range -30°F to 230°F (250°F intermittent)
- Commonly used with greases, aliphatic hydrocarbon mineral and vegetable oils, and various hydraulic fluids

(3) **Back-up rings** prevent seal extrusion and allow larger e-gaps. Note temperature and chemical limitations

Most Common:

MoS2 filled Polyamide
- Working Temp. Range -65°F to 250°F
- Commonly used with greases, aliphatic hydrocarbon mineral and vegetable oils, and various hydraulic fluids. Avoid water based fluids.

ORDERING INFORMATION

TLC - __ __ __ __ __ __

REFERENCE PART NUMBER

"8J3747" = 4.500" SEAL

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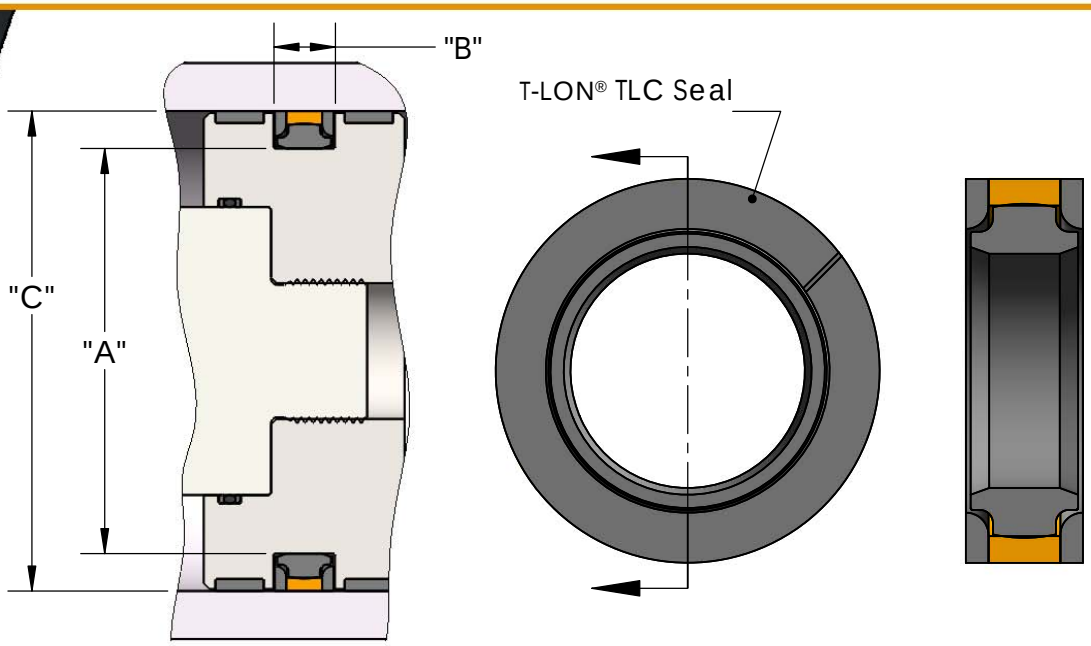

T-LON® "TLC" Series Piston Seal Sizes

Reference Groove dimensions for "TLC" series

Reference Number	T-LON® Part Number	Gland Dimensions (Inch)		
		Bore Dia H9 tol (C)	Groove Dia ±.003 (A)	Groove Width ±.002 (B)
RCAT-8J3747	TLC-8J3747	4.500	3.840	0.500
RCAT-9J7868	TLC-9J7868	5.000	4.230	0.630
RCAT-8J8767	TLC-8J8767	5.500	4.730	0.630
RCAT-9J1242	TLC-9J1242	6.000	5.090	0.630
RCAT-9J5558	TLC-9J5558	6.250	5.340	0.630
RCAT-8J8703	TLC-8J8703	6.500	5.590	0.630
RCAT-8J3749	TLC-8J3749	7.000	6.090	0.630
RCAT-8J4510	TLC-8J4510	7.250	6.340	0.630
RCAT-9J5567	TLC-9J5567	7.500	6.590	0.630
RCAT-8J5644	TLC-8J5644	7.750	6.840	0.630
RCAT-3G4762	TLC-3G4762	8.500	7.510	0.630
RCAT-9J3406	TLC-9J3406	10.000	8.880	0.690
RCAT-3G4765	TLC-3G4765	10.500	9.380	0.690
RCAT-9J2987	TLC-9J2987	11.500	10.380	0.690

Note: Caterpillar® part numbers and groove dimensions are shown for reference only. Their appearance here does not imply they are the original product of Caterpillar®.