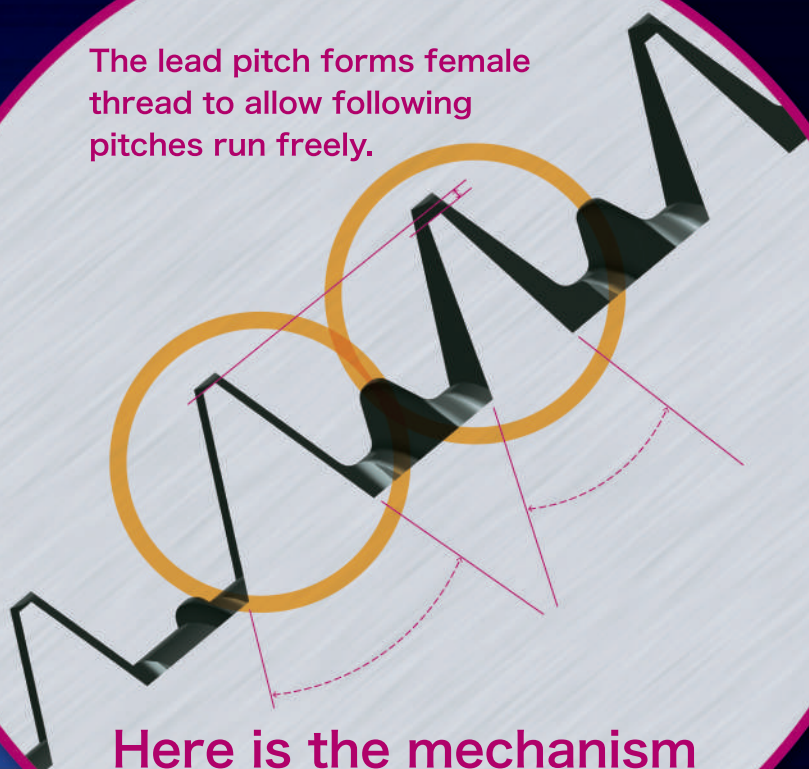


The lead pitch forms female thread to allow following pitches run freely.



Here is the mechanism to reduce friction resistance.

Breakthrough for perfect screw tightening

Prevents Incomplete seating
of screws at soft metal assembly

Self-tapping Screw
for soft metal

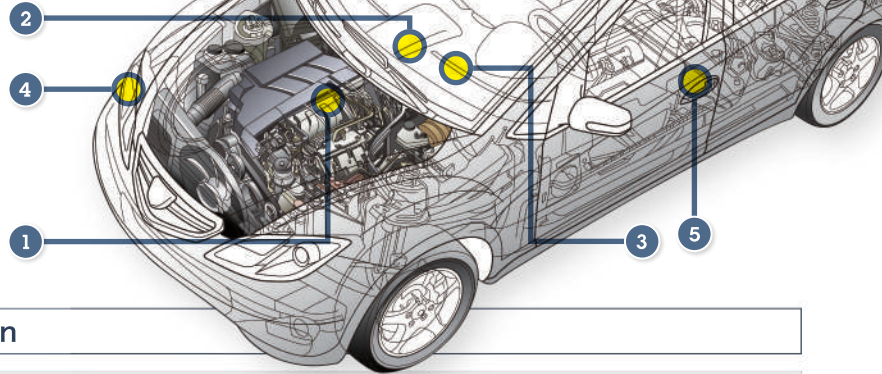
ALUMITITE®

The specially designed thread;

- ✓ Reduces friction.
- ✓ Reduced friction prevents from galling of threads with mating soft metal parts.
- ✓ Anti-galling prevents incomplete screw seating.

Major application for automotive

- 1 Compressor (Air-conditioner)
- 2 Electric control unit (Brake)
- 3 Electric control unit (Power steering)
- 4 Head lamp
- 5 Seat belt (Retractor)



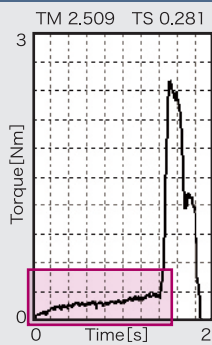
Performance comparison

■ **Testing machine** Torque test machine AX-200 (Manufactured by Nitto Seiko Co., Ltd.) Thrust 68.8N

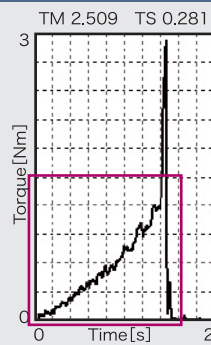
■ **Fastening condition** Material of mating part A5052 Material thickness t=15 Hole diameter ϕ 2.65~2.66 Material of object SPCC Material thickness t=1.0×3

Failure torque test

ALUMITITE ϕ 3×8
Zinc+Trivalent Chromate+Wax



S-TITE ϕ 3×8
Zinc+Trivalent Chromate

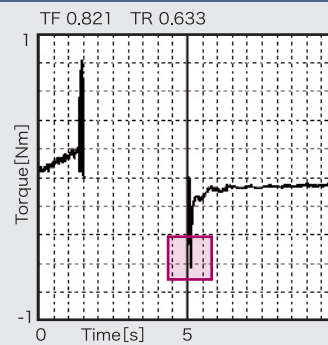


Rotation speed 300rpm

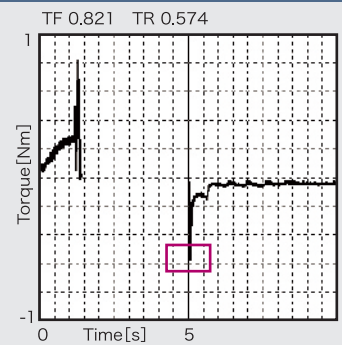
Thread forming torque (TS)	0.281	Thread forming torque (TS)	1.219
Failure torque (TM)	2.509	Failure torque (TM)	2.931
Drive-to-Strip torque ratio (k)	8.929	Drive-to-Strip torque ratio (k)	2.404

Loosening torque test

ALUMITITE ϕ 3×8
Zinc+Trivalent Chromate+Wax



S-TITE ϕ 3×8
Zinc+Trivalent Chromate



Initial torque 0.5N·m Rotation speed 300 rpm / Tightening set torque 0.8N·m Rotation speed 50 rpm

Tightening torque (TF)	0.821	Tightening torque (TF)	0.821
Breaking torque (TR)	0.633	Breaking torque (TR)	0.574
Loosening torque ratio	77.1%	Loosening torque ratio	69.9%

Verification of galling

■ Vibration test

Vibration acceleration / 4.5G Amplitude width / 2mm
Frequency / 33.3Hz Time / 2 Hours

This is an enlarged photograph of screws which are removed from aluminum mating parts after vibration test.

White portion of photograph is stucked aluminum by galling.

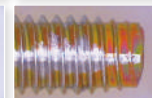
※Screws with colored chromate plating are used to highlight galling of aluminum.

Machine screw

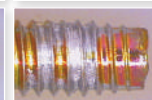
S-Tite

ALUMITITE

Material of mating part
A1050



Material of mating part
A5052



Prevent galling

NITTOSEIKO CO.,LTD.

Fastener Division
Global Sales Section

Website : <https://www.nittoseiko.co.jp/en.html>



[Website]

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IATF 16949
JP18/063026



ISO9001
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E0954
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-Yata Factory