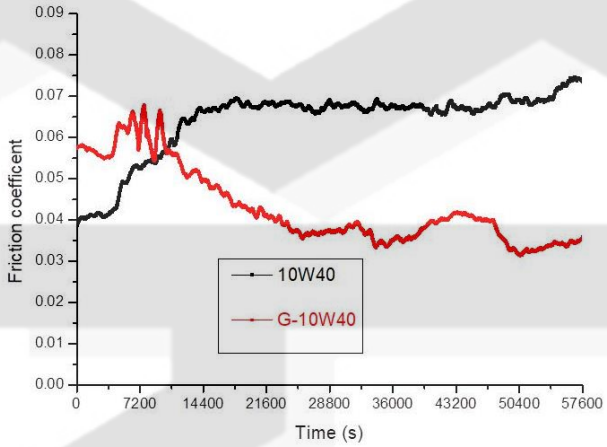
Graphene Lubricant Test

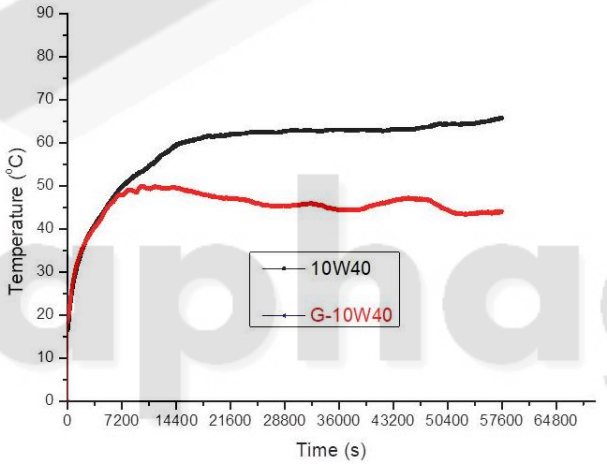
Enerage Inc.

Test Condition

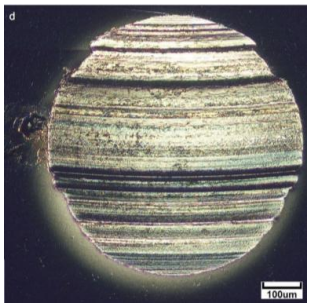
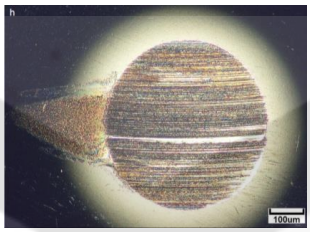
Test Title: Four-Ball Wear Scar Test
Test Object:
10W40 Commercial Lubricant &
0.5wt% Graphene in 10W40 Commercial Lubricant (denoted as G-10W40)

Test Result





Sample	Avg. Coefficient of Friction	Avg. Working Temperature
10W40	0.064	58.9℃
G-10W40	0.043	45.4℃
Improvement	33%	23%

	Microscopic Image	Diameter of Wearing Scar
10W40		655.2 μm
G-10W40		484.6 μm
Improvement		26%

Summary

Compared to the commercial lubricant 10W40,few amounts of graphene introduced lubricant effectively reduces the coefficient of friction, working temperature and wearing scar up to 30%, 23% and 26%, respectively. It prevents the working piece damaged quickly and allows it durable.