

TÜPRAG GOLD MINE

COMPANY NAME: TÜPRAG

- ◆ **Location:** Near Uşak, Turkey
- ◆ **Mine:** Kışladağ Gold Mine, largest gold mine in Turkey
- ◆ **Operating Since:** 2006

DGB Adoption Story

Operating the largest gold mine in Turkey, Tüprag's daily motto reads, "Human beings and environment come first, mining follows." By equipping their 785C mining trucks with DGB, they saw an opportunity to better their mining and environmental practices—lowering their fuel cost and lowering their emissions footprint. In 2017, the company piloted two DGB kits on 785C trucks. The results? The same productivity, payload and performance expected from their diesel fleet. Aligned with production demand, the company plans to convert more mining trucks to DGB.

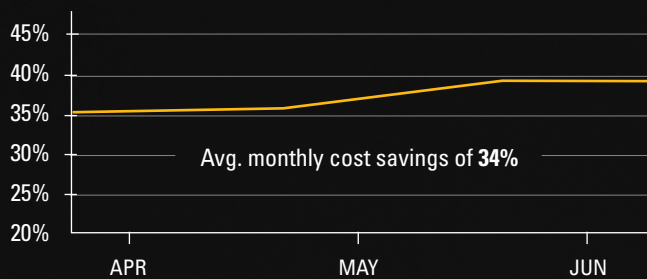
Numbers That Matter

- 85%** ▶ Tüprag reached an 85 percent peak substitution of LNG over diesel fuel.
- 65%** ▶ On average, the cycle displacement was 65 percent LNG over diesel.
- \$30** ▶ The customer was able to save \$30/hour on operating costs. When most mines operate 24/7/365—you can do quick math on how the savings add up.
- 34%** ▶ Over a six-month study, DGB was able to save their trucks an average of 34 percent on operating costs.

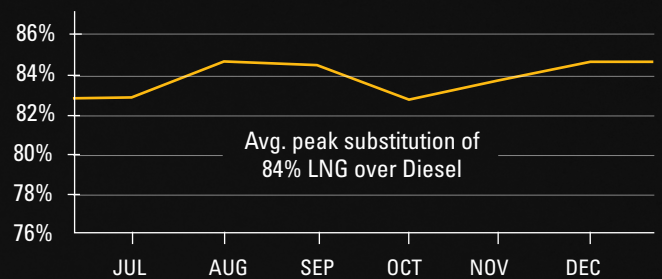


THE BELOW CHARTS SHOW THE DGB PERFORMANCE OF TWO MINING TRUCKS OVER A 6-MONTH STUDY DONE BY TÜPRAG AT KIŞLADAĞ GOLD MINE.

TÜPRAG MONTHLY COST SAVINGS WITH DGB



TÜPRAG MONTHLY PEAK DIESEL SUBSTITUTION (W/ LNG)



Up to the Test

Tüprag monitored a series of tests on two trucks to ensure DGB was worth the investment and could maintain performance standards of a diesel-only machine. The test measured cycle displacement, speed on grade and the ability to run on diesel backup if needed. Both DGB mining trucks passed every area of the test. Speed variation with LNG proved to be less than a half percent lower on one truck, and the second truck actually performed faster than the diesel-only machine. Both trucks showed the ability to run on 100% diesel backup if needed, with no performance difference. And after seeing cycle displacements averaging around 67%, the fuel savings confirmed the biggest result: DGB is an investment that will pay for itself.

Email DGBhelp@cat.com with any questions you may have today.