



CASE STUDY

Fuel tank repair keeps mining trucks moving

To recondition or repair large fuel tanks, they often need to be taken off a vehicle, drained, made explosion proof, then welded. With cold spray, you can repair fuel tanks and parts in-situ.

Fuel tanks for large mining trucks often require maintenance in the form of crack repair, and are subject to stringent maintenance programs. Often when mining truck fuel tanks require divot or crack repair, they must be taken off the truck, emptied, and made explosion-proof. Only then can they be repaired with welding.

This multi-step process requires significant time and resources, and when outsourced can take weeks or months, and incur significant logistics costs. This downtime can also lead to lost revenue, leaving expensive assets lying dormant.

Alternatively, because cold spray is a low-temperature, no-melt metal deposition process, operators are able to rapidly repair fuel tanks by hand - without having to remove them.

Because cold spray doesn't introduce heat into the part, it can also be used to rapidly repair transmission cases, cylinder heads, shafts, barrels, and more, without distortion or changing the metal's grain structure..



A rapid repair

Rather than detach and drain the 5000 litre fuel tank, Brauntell 'veed out' the crack in the tank, then used the portable, hand held D523 unit to fill the divot with nickel. It took just ten minutes to fill the hole with nickel, before grinding back with an angle grinder, fully restoring the crack and returning the tank to a safe state.

Fuelling efficiency

From start to finish, the entire repair job took 30 minutes and cost under \$100 in materials. Not only did the manufacturer save a significant repair bill, they also avoided a potential downtime of weeks or months, along with lost revenue.



Case study snapshot

What: Mining truck fuel tank repair

Where: Brauntell NSW

How: D523 low-pressure cold spray system with nickel

Outcome: Tank repaired in 30 minutes for less than \$100 in material costs.



Filled & polished surface



The portable D523 cold spray system