

Material Transfer Vehicle

– remixing materials on site, improving quality and performance



“The fundamental reason for road failure is a segregated mix – either by temperature or of material. The Material Transfer Vehicle eliminates the potential of segregation occurring through disruption of asphalt supply or loading errors.”





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A fundamental reason for the failure of a road surface is segregated hotmix

A rough textured road with a lot of bumps affects the riding surface of the road. A lack of road smoothness increases the amount of wear and tear on the running gear of vehicles, in particular suspension and wheel bearings. It also reduces the expected life of the road.

Once a road surface begins to deteriorate and potholes occur, vehicles then hammer the road on a continuing basis and road failure becomes inevitable.

This does not need to occur.

The Material Transfer Vehicle (MTV) provides continuous paving and a homogenous mix finish eliminating potential pavement faults caused by:

- Failure of drivers to precisely co-ordinate loading operations, bumping the paver and thereby affecting asphalt paving operations and finished riding surface
- Variations in supply of materials to paver and temperature and mix segregation resulting in ‘bony’ sections
- Paver having to be stopped to load more asphalt resulting in surface bumps
- Differing masses of material resulting in varying levels of graded material.

Material has to be well blended to achieve an effective wearing course. In order to achieve this, material and temperature segregation must be avoided and continuous non-stop paving achieved.

Continuous paving eliminates segregation and leads to higher performance standards

Continuous paving results in a better and more predictable end result and potentially can add up several years or more onto the life of the road and reduce overall maintenance costs over the lifecycle of the road.

Key features and advantages of the Material Transfer Vehicle:

- In-hopper remixing augers aggressively reblend material
- Material is quickly channelled from the hopper to the conveyors, reducing temperature loss
- Aggressively reblends 100% of the material being drawn from the hopper through interleaving augers, mixing in a ‘figure eight’ motion.

Without the use of a material transfer vehicle, it is difficult to pave non-stop.

Quality, non-stop, continuous paving

Continuous paving processes are imperative to achieve a high quality road surface. Not too dissimilar to waterskiing – there needs to be a constant plane achieved under tow.

Asphalt easily becomes segregated during loading and transportation and will only compact with a temperature window of 90 – 160 degrees Celsius.

A twin counter-rotating auger in the MTV acts like a giant eggbeater remixing the material so that it remains homogenous and a consistent grade of material is produced.

The MTV keeps the paver hopper full, and a larger mass of material eliminates segregation. Paving operations do not need to be halted and this provides plenty of time to complete an effective truck exchange. By keeping things in equilibrium there is a constant force on the screed ensuring a smooth asphalt layer.

Currently this machine is the only one of its type in New Zealand and has been utilised on a number of unique projects including the Hampton Downs Racetrack surfacing, but its use is standard in other countries where a total quality output is required at time of pavement lay-down.

