

Helping New Zealanders Build & Modify Safe Vehicles



COPIES OF 'ASTRO SUPREME'-BRAND WHEELS

Multiple failures of aftermarket copies of the 'Astro Supreme'-brand wheel (often referred to as 'Supremes') have been reported to LVVTA. These wheels have been sold by a number of different retailers over many years, but most feature the same poor design and construction methods. The failures occur when the welds attaching the spoked centre section to the outer rim crack, causing either partial or complete separation of the centre section from the rim.

The original Astro Supreme wheels were made by Astro Enterprises of Gardena, California, who started manufacturing them in 1964. There were no known issues with the original design of the Astro Supreme wheel.

However, modern-day copies of the Astro Supreme-brand wheel have not replicated the original design or attachment methods. Instead, most use a die-stamped and chrome-plated steel centre section, with a poorly designed gusset for the attachment of each of the five spokes, which is welded to the rim. Typically, the weld quality is very poor, more than likely due to the use of deliberately low welding amperages (in an effort to reduce chrome discoloration). These welds are prone to fatigue cracking, and eventually, complete separation.

Identifying whether wheels are the affected type will generally require either removal of the wheels from the vehicle, or inspection from underneath (for example on a vehicle hoist).

Any vehicle found to be fitted with the affected wheels should not be used until they have been replaced with compliant wheels.



Left: Front face of typical copy of an Astro Supreme-brand wheel. **Right:** Weld failures on a copy of an Astro Supreme-brand wheel.

Image Source: Photos kindly supplied by Vahry Photography, Parnell, Auckland.

For more information on unsafe copies of the original Astro Supreme-brand wheels, please refer to LVVTA Information Sheet [# 01 - 2023 Copies Of 'Astro Supreme'-brand Wheels](#).

LVVTA requires that LVV certification must be refused to any vehicle fitted with this type of wheel (with the sole exception of a trike rear axle, and then only under strict circumstances).



FOR FURTHER INFORMATION PLEASE CONTACT YOUR LVV CERTIFIER, OR LVVTA.