

High Performance Locomotive Auxiliary Power Unit (APU)

from Unipart Rail

Fuel and Maintenance Savings - Guaranteed!



Reduces ineffective idling and fuel consumption by up to 80%

Significantly reduces toxic emissions of NO_x and CO₂

Eliminates noise whilst locomotive is stationary

Increases periodicity between engine overhauls

Eliminates failure of starter motors and batteries on engine re-start

Keeps air circulation to maintain cab conditions for crew

Provides battery charging and circulation of engine lube oil and coolant to maintain service readiness

Compatible with existing AESS systems

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Solving the problem of wasted fuel whilst idling with a possible 18 month payback



The Banana APU uses technology that extends locomotive life through the reduction of idling. When there is a period of prolonged idling or whether the locomotive engine is manually shut down, the Banana APU system switches into 'Sentry' mode.

During the 'Sentry' mode the locomotive engine is shut down and the APU system pre-lubes the locomotive engine and trickle charges the engine batteries while heating the water in the engine as required. This allows electrical equipment such as loco cab amenities and air conditioning to continue running.

Environmental Benefits

The use of the Banana APU will reduce a typical locomotive's fuel consumption from 20 litres per hour when idling to just 1 litre. The system also reduces NOX, SOX and CO₂ emissions together with noise levels which can be an important factor in residential areas and other sensitive environments.

Operational Benefits

By shutting down the engine during idling it effectively stops the clock on engine overhaul run hours, thus extending the time between overhauls. In some situations locomotive engines can spend up to 70% of engine run time in idle and the use of the Banana APU keeps the engine lube oil fluids running which results in less effort being required to start the engine and less wear on starter motors and batteries.

The unit is fitted on the locomotive and is integrated into the coolant, fuel and oil lube pipework and electrical system to maintain the key functions of the locomotive whilst the engine is shut down and the Banana APU is in 'Sentry' mode.

Financial Benefits

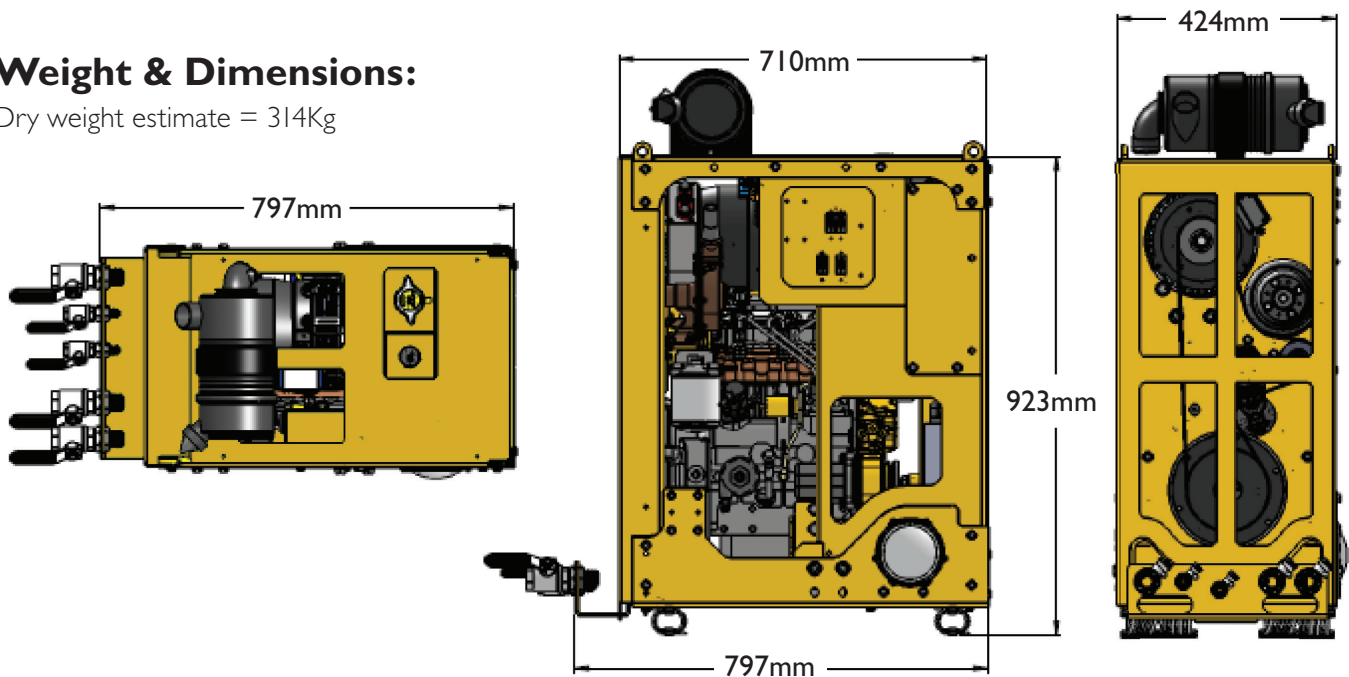
Depending on the amount of idling time per day, the operational time of the locomotive in service and the cost of fuel, the payback on the installation of a Banana APU can be **as little as 18 months.**

Auxiliary Power Units (APUs) from the specialist supplier, INPS of North America, have been fitted to many locomotive types in the transportation industry over the past 15 years. The Banana APU model has been specifically designed for rail locomotives and incorporates an advanced control system complete with adjustable on/off locomotive water temperature and battery set points and diagnostics with freeze-frame data and real time data monitoring.

Specifications and features:	
Engine	CAT/Perkins 400 Series 3 Cylinder Diesel, 28 hp@3200 rpm; Tier 4 Interim; Low oil pressure and coolant over-temperature shutdown's
Lubrication system	23 litres oil capacity with oil level maintainer and filter
Electrical System	150A, 72VDC generator for locomotive loads; 40A, 12VDC APU alternator for APU loads
Fuel System	12VDC electric fuel lift pump; filter
Exhaust	38mm diameter pipe; muffler shipped loose
Cooling System	Glycol based APU cooling system; cooled via liquid to liquid heat exchanger with locomotive water
Locomotive Engine Water Heating System	12 kW via smart 72V heater ; 83 litres/min centrifugal belt driven pump
Locomotive Engine Oil Heating System	15 litres/min circulation via APU driven pump through liquid to liquid heat exchanger
Drive System	Heavy duty long life generator

Weight & Dimensions:

Dry weight estimate = 314Kg



To arrange a survey of your fleet to assess the suitability of the Banana APU please complete the enquiry form using the link www.unipartrail.com/products-enquiry.html

About Unipart

The Unipart Group is a leading UK manufacturer, full service logistics provider and consultant in operational excellence. Operating across a range of market sectors, including automotive, manufacturing, mobile telecoms, rail, retail and technology, Unipart offers a breadth of services to a wide range of blue chip clients internationally.

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