

CASE Methane-Powered Wheel Loader Concept – ProjectTETRA

Engine	FPT Industrial NEF 6-cylinder engine
After treatment system	Single three-way catalytic converter No DEF/AdBlue required
Compliant with engine emissions regulations	Exceeds current regulations
Maximum Engine Power	230hp (172kW)
Maximum Hydraulic Flow	240 liters/minute
Auxiliary Hydraulic Circuit Maximum Flow	260 liters/minute
Loader Speed Raising/Dump (loaded)	6.2 sec / 1.2 sec
Maximum Pivot Angle	40°
Connectivity	Fully-integrated telematics package and automatic obstacle detection system



Methane Filling and Tank Design

- The biomethane filling system is as easy and as efficient to use as that on a diesel-powered wheel loader, and can be filled from ground level.
- The technologically advanced tanks ensure a full day's autonomy, and are situated to the rear and left and right sides. Filling is via a single nozzle.

Cab

- Forward stance cab offers an aggressive appearance and enhanced ground visibility.
- Automatic sliding door.
- Wrap-around glazing provides 360-degree visibility, with a 16% increase in the glazed area compared to a standard wheel loader. Addition of high visibility roof panel.
- The use of viewing cameras eliminates the need for wing mirrors, with the surrounding view displayed on the A-Pillar screens – which are synched to machine direction.
- The use of technological materials – wipe down cab trimming and a combination of leather and robust technical cloth on the seat.
- Automatically-pivoting seat upon door opening for facilitated cab entry, which returns to the operating position immediately after the operator is seated, with override functionality. The seat features integrated lumbar support, weight compensated suspension and active heating and cooling systems.
- A simplified, wrap around armrest, which is integrated into the seat, features core wheel loader controls.

Displays

Integrated color touchscreen monitor in the wrap around armrest provides instant access to key operating parameters and functionality including:

- Face scan to activate start-up sequence;
- Bucket load-fill assist screen;
- Jobsite map;

- Real-time weather reports;
- Lighting parameters – to select auto-on or to individually activate specific work or driving lights;
- Bluetooth telephone controls;
- Heating and ventilation controls;
- Media center;
- Secondary machine parameters, machine settings and additional submenus.

Operators can swipe views between the armrest mounted monitor and the lower right hand A-Pillar screen to expand the view and 'pin' it while working.

The two A-Pillar mounted displays contain a range of at-a-glance machine information for easy consultation while working.

- The left hand screen, and the upper pane on the right hand side display feeds from the viewing cameras which are automatically synched to the wheel loader's direction of travel.
- The central screen on the right contains machine operating parameters including:
 - Machine speed;
 - Engine speed;
 - Fuel level;
 - Engine temperature;
 - Oil temperature;
 - Selected gear;
 - Engine hours;
 - The time.
- The lower screen can be customized by the operator by selecting the desired screen from the armrest-mounted color touchscreen, options include:
 - Jobsite map;
 - Lighting package options;
 - Media package;
 - This screen also displays alerts such as when obstacles are detected or incoming messages.

Voice control technology is used to manage

- Climate control;
- The media center;
- Telephone calls.

Safety features

- Remote retina scan machine priming (heating and cooling functionality activated) through a linked mobile telephone.
- Biometric face scanning for door opening and machine start-up.
- Integrated obstacle detection technology.