

2015 Maskin Expo: Enhanced comfort for operators with Liebherr wheel loaders

- Liebherr wheel loaders L 538 and L 580 at 2015 Maskin Expo
- Broad range of optional equipment, for example an additional heating or an automatic central lubrication system, increase comfort at work
- Up to 25 percent less fuel consumption due to hydrostatic driveline

Stockholm (Sweden), 28 May 2015 – Liebherr is exhibiting the wheel loaders L 538 and L 580 at the 2015 Maskin Expo. Both machines are equipped with kinematics that are suitable for industrial applications. The L 538 is a real all-rounder – even the organizer of the 2015 Maskin Expo uses this Liebherr wheel loader for setting up the fairgrounds. The modern cabin design and a broad range of sophisticated equipment, such as the additional heating at the L 580, enhance comfort for the operator. Due to the hydrostatic driveline, both exhibits are very fuel efficient, consuming up to 25 percent less fuel.

At the 2015 Maskin Expo, Liebherr is presenting the L 580 wheel loader with industrial lift arm and a 5.0 m³ HD version rehandling bucket, which is particularly suitable for the loading and handling of heavy bulk materials. Additionally, Liebherr is exhibiting the L 538 all-round wheel loader with parallel kinematics and a 4.0 m³ light material bucket. This working attachment is useful at loading and handling light bulk material. Powerful Stage IIIB / Tier 4i diesel engines drive the L 580 (215 kW / 292 HP) and the L 538 (115 kW / 156 HP).

Intelligent design enables high tipping load

Engineers developed a clever solution during the installation of the engine: Liebherr installs the engines in the rear of the machine – crosswise in the L 538, and lengthways in the L 580 with the output shaft facing backwards. In these unique ways, the compact design means that the diesel engine and the variable displacement pump counterbalance each other. The centre of gravity shifts to the rear of the machine. Liebherr does away with additional ballast and achieves lower operating weights and higher tipping load potential.

The tipping load of the L 580 shown at the 2015 Maskin Expo, which has an operating weight of 27,100 kg, amounts to formidable 17,000 kg. The 13,600 kg heavy L 538 has a tipping load of 8,730 kg. Businesses can benefit from this balance of operating weight and tipping load as handling capacity increases per operating hour. Productivity increases with usage, because larger buckets can be attached. Also the organizer of the 2015 Maskin Expo appreciates this performance and deploys the L 538 for setting up the fairgrounds. Moreover, the mounting position of the diesel engines means that all maintenance points are readily accessible.

The industrial lift arm at the L 580 and the parallel kinematics at the L 538 offer high torque in the upper lifting range, which is ideal for attaching larger, heavier equipment. Moreover, the driver can move the load over the entire hoisting area without altering the control settings. Hence, both kinematics are suitable for applications in the industrial sector. They are available as an alternative to the standard Z-bar linkage at no additional cost.

Sophisticated equipment enhances comfort at work

Sophisticated details simplify the operator's everyday work. For instance, Liebherr installs the radiator at the cleanest spot of the wheel loader – between diesel engine and cabin. Due to this design solution, air with less dust can be absorbed, reducing efforts for cleaning and maintenance. As an additional asset, the air pre-cleaner TOP AIR can be seen at the exhibit L 580. It spins the incoming air and ejects particles by using centrifugal forces. Coarse dust, such as lint, fluff or pulp, cannot enter the system, which extends the service life of the air filter.

For cold winters in Scandinavia, the L 580 is equipped with an additional heating with motor pre-heating. This optional heating is temperature-controlled and can be programmed to start at a specific time. The primary purpose is to pre-heat the water-cooled engine. As soon as the coolant has warmed up sufficiently, the heater blower starts turning. Heating the cabin and defrosting the windows, the additional heating increases the comfort for the driver.

Furthermore, the L 580 exhibit is fitted with the Liebherr automatic central lubrication system. It lubricates the machine continuously with accurately metered amounts of grease while the machine is in operation. This is because the frequent supply of small amounts of grease is considered to be more effective than a few large amounts. This method helps to distribute the lubricant evenly in the bearing and reduce wear considerably.

In designing the cabin, Liebherr prioritised the wellbeing of the driver. Both wheel loaders at the 2015 Maskin Expo offer a modern, ergonomically planned cabin. The cabins are equipped with large window areas, offering clear all-round visibility to the driver. He can retain an overview of the entire working and manoeuvring range, increasing safety at work. As a result, the operator can immediately respond to any dangerous situations in the proximity of the machine. The operator's seat, displays and controls form an ergonomic unit. The driver can control all working and travel functions precisely with a single control lever.

Hydrostatic driveline increases fuel efficiency

Like all Liebherr wheel loaders, the L 538 and the L 580 are hydrostatically powered. Under the same working conditions, Liebherr wheel loaders consume up to 25 percent less fuel per operating hour with the hydrostatic driveline. The hydraulic braking action of the driveline minimizes brake wear. Continuous tractive force regulation reduces tyre wear by up to 25 percent. As a result, the hydrostatic driveline helps to decrease business, service and maintenance costs. In addition, the driveline allows continuous regulation of acceleration in all speed ranges, without noticeable gear shifting or interruption in tractive force.

The Liebherr Power Efficiency (LPE) system developed by Liebherr lowers fuel consumption as well. LPE ensures that all work and travel processes of the machine interact in an ideal fashion. The system achieves the highest possible efficiency level from all elements by proactively engaging in engine control, enhancing engine speed and adjusting the pivot angle of the hydraulic pump. Thus, handling capacity and fuel efficiency is enhanced, meaning that more work can be done with every litre of fuel used.

Image captions

liebherr-all-round-loader-l538-high-dump-bucket.jpg

The Liebherr all-round wheel loader L 538 at scrap handling. Equipped with parallel kinematics, larger and heavier equipment, such as a high-dump bucket, can be attached. This is especially useful for applications in the industrial sector.

liebherr-wheel-loader-l580.jpg

Sophisticated design solutions simplify the operator's everyday work. The L 580 is an example: Liebherr installs the radiator at the cleanest spot of the wheel loader – between diesel engine and cabin. As a result, clean air can be absorbed, reducing efforts for cleaning and maintenance.

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