



UNITED STATES DEPARTMENT OF DEFENSE

HUMANITARIAN DEMINING R&D PROGRAM

Mine Clearing Loader

Armored, tracked and wheeled loaders with multiple tools for tilling, digging, and sifting AP mine-contaminated soil

The Mine Clearing Loader project takes advantage of the unique, multipurpose characteristics of commercial loaders for the task of mine clearance. The system provides efficient material handling capability using many of the proven excavator-based sifting technologies in situations where reach-in capability is not a requirement. The system also performs significant excavation and tilling tasks for mine recovery and area preparation, as well as service tasks related to transporting mine contaminated soils and loading of mine contaminated soils into stationary screening systems like the Orbit Screen. The protected cab shields the operator from risk of unintended mine blast during clearance operations.



Tracked loader with Remu shredding bucket

STATUS

The Chilean National Demining Commission executed a highly successful OFE with the Mine Clearing Loader from 2013 to 2020. Working together with the Multi-tool Excavator, they cleared 8,138 mines from 568,884 cubic meters of soil.

The tracked system is available for an operational field evaluation.



Wheeled loader with Flip Screen sifting bucket

Cutting-Edge Solutions
DEMINING TECH
MINE CLEARANCE & AREA PREP



FEATURES

- Armored operator cab
- Quick attach coupler for exchange of loader tools in minutes
- Rear mounted ripper for loosening soils prior to excavation
- Flip Screen and Supersort buckets for collecting and sifting contaminated soils
- Remu shredding bucket for aggressive sifting
- Multipurpose excavation bucket for dozing and material loading
- Loader rake for obstacle/vegetation removal

APPLICATIONS

- Area preparation
- Soil tillage
- Excavation and sifting
- Contaminated material
- Transport and loading

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MCL operating in Chile

724K JOHN DEERE WHEELED LOADER SPECIFICATIONS

Length	323 in / 8.2 m
Width (unarmored)	114 in / 2.9 m
Height (unarmored)	135 in / 3.4 m
Weight (unarmored)	23,655 lb / 10,730 kg
Breakout Force	32,019 lb / 14,524 kg
Power	264 hp / 197 kW
Max Road Speed	24.9 mph / 40 kph
Bucket Volume	4 yd ³ / 3 m ³

953D CATERPILLAR TRACKED LOADER SPECIFICATIONS

Length	262 in/ 6.7 m
Width	89.7 in/ 2.3 m
Height	122.2 in/ 3.1 m
Weight	36,000 lb/ 16,329 kg
Breakout Force	30,800 lbf/ 137,005 N
Ripping Force	30,810 lbf/ 137,050 N
Power	148 hp/ 110 kW
Max Road Speed	6.2 mph/ 10 kph
Bucket Volume	1.96 yd ³ / 1.5 m ³
Transmission	Hydrostatic

Several of the Loader's suite of attachments:



Flip Screen Sifting



Rake with Clamp



4 in 1 Multipurpose Bucket



REMU Shredding



Supersort Sifting



Soil Ripper