
Mitsubishi Crawler Tractor ASUMA GCR1380

Power & Pride: Full Crawler Tractor GCR1380 (102.1kW [138.8PS])



Mitsubishi Mahindra
Agricultural Machinery Co., Ltd.

Mitsubishi Agricultural Machinery Co., Ltd. entered into a capital tie-up with Mahindra & Mahindra Ltd. of India in October 2015 and changed the company name to Mitsubishi Mahindra Agricultural Machinery Co., Ltd. Using the tie-up as a turning point, we will make efforts to further improve our technical and sales capabilities and accelerate our worldwide business development. The “Mitsubishi Crawler Tractor,” one of our major products, is introduced below.

1. Aim of the development

In a time when agricultural policies are undergoing changes and agriculture in Japan is about to see a major shift, the incorporation of agricultural management entities and the expansion of management scales are progressing. Responding to this trend, the need for larger agricultural machines is increasing.

Under such a situation, demand is expected for full crawler tractors featuring high maneuverability for use in large-scale agricultural fields. We introduced the GCR1380, a full crawler tractor conforming to the Tier 4 Regulations on Emissions From Non-road Special Motor Vehicles in Japan, to the market in response to this situation.

2. Concept of the product

The “eagle design,” the new design concept of our agricultural machines, was incorporated into the GCR1380. The crawler tractor, one of the largest in the domestic market, features the high power and reliability of eagles and characterized by their strength and pride, and the body is extremely impressive. The product features overwhelming workability unique to full crawler tractors and features a 138 HP high-output engine conforming to the Tier 4 Domestic Emission Controls. As for the basic performance, superior offerings including the high-durability transmission were inherited from the previous model, and new functions were incorporated to realize more effective operations.

3. Features

3.1 Accurate engine control by common rail engine

- (1) Mounted with a common rail engine conforming to the Tier 4 Regulations on Emissions From Non-road Special Motor Vehicles in Japan

The product demonstrates its power in a variety of operations because of its high output and excellent torque characteristics. It also satisfies the latest emission controls and features high environmental performance.

- (2) Engine speed upper limit setting

An upper limit can be set for the engine speed so that the speed does not exceed the set speed when the engine control lever is operated, which prevents the wasting of fuel.

- (3) Engine speed memory function

The product is equipped with a function to set the engine speed at two patterns, and

therefore the engine speed can be adjusted by one-touch operation according to the operation scene, allowing the speed to be easily set. Consistent operations are possible even if the machine is operated by different operators.

(4) Automatic deceleration function

The product is equipped with a safety function for returning the speed to a low idling speed automatically when the tractor is not operated for a certain period. It is a convenient function that reduces noise and fuel consumption.

3.2 Workability that supports highly-efficient operations

(1) The “Gyro MAC” cultivates with high accuracy and a good-looking finish

A high level of smoothness is ensured in areas with rough surfaces such as headlands, because the fact that the tilting speed of the rotary is controlled by a gyro sensor and according to the speed at which the machine is tilted. The sensitivity to slopes was improved, and the machine responds to minor changes in angle, reducing the torsion phenomenon that is observed in normal tractors.

(2) Smooth turning operation realized by external hydraulic turning interlock function

The product is equipped with an external hydraulic turning interlock function that automatically reverses the working machines such as a reversible plow at each turn.

(3) External hydraulic timer function

An external hydraulic system operation switch is mounted on the side panel of the operator seat, and a timer that activates the external hydraulic system for a certain period is turned ON by operating the switch.

(4) External hydraulic system operation switches on left/right rear of the body

External hydraulic system operation switches are mounted on left/right rear of the body, and the external hydraulic system can be operated from outside the machine.

(5) Working lights, headlights

In addition to two headlights, working lights are mounted at 10 locations at the front and rear of the machine to ensure operations in a well-lit environment in early morning and at night.

3.3 Smooth operation and comfortable riding

(1) Multi-function display that displays the operation state in a timely manner

The product is equipped with a “multi-function display,” an LCD color monitor that displays the operating state and allows changes to various settings. The color monitor features high visibility and can be turned to a position suitable for viewing by the operator.

(2) Multi-function main transmission lever

The operation efficiency is improved because the backup function, quick up, sub transmission and acceleration switches can be operated while gripping the main transmission lever.

(3) Convenient functions are concentrated in one location

The main transmission lever, hydraulic operation lever and switches for various functions are concentrated in the console on the right side of the cabin. The operability has been improved significantly due to the synergy effect of the concentrated functions and the swivel seat.

(4) Luxury seat

The seat is equipped with suspension stiffness adjustment, front/rear sliding, swivel (10° to the right) and reclining functions. The riding comfort is good even when traveling on roads, preventing exhaustion.

(5) 50 A large-capacity power supply is standard equipment

The product has a 50 A large-capacity power supply as standard equipment and it is easy to attach working machines that require high current.

(6) Equipped with accessory power

The product is equipped with accessory power that can be used for charging smart phones, etc.

(7) Radio unit with USB port and external input terminal

The radio unit is equipped with a USB port and an external input terminal, making it possible to listen to music by connecting a music player.

3.4 Reliable durability and maintainability

(1) Powertrain of a higher level

The product features a top-class transmission, and it exerts power in traction and PTO (Power Take Off) operations, as the output is transmitted by the transmission, which is resistant to load.

(2) Floating seals are used on turning wheels and idler gears

Floating seals featuring high sealing performance prevent the intrusion of mud and fine soil, improving the durability of the suspension system and reducing the running cost.

(3) Full open bonnet

The integrated bonnet can be opened easily without using tools and is convenient for daily inspection of the engine compartment.

(4) Split-type sprockets

Split-type sprockets, which feature high maintainability, are used.

3.5 Reliable durability and maintainability

(1) Equipped with anti-theft function

The product is equipped with an anti-theft function and an alarm is activated when abnormal vibration of the tractor is detected.

(2) Supported by MIT services (separate contract required)

Information on operations and state of the machine is accumulated in MIT services via wireless communication, using a communication device and a GPS antenna mounted on the machine, and machines owned by customers are supported based on the information.

Contents of services

[1] Anti-theft notification (Sent to registered e-mail address)

[2] Operation history management

[3] Notification of rollover

[4] Notification of maintenance

[5] Repair based on error notification

3.6 Release

December 2017

Website for introduction of the product:

<http://www.mam.co.jp/product/tractor/gcr1380/gcr.php>



Figure 1 Mitsubishi Crawler Tractor ASUMA GCR1380