



New Assembly Plant in Awazu



New Assembly Plant Completed at the Awazu Plant

In May 2014, a new assembly plant was completed at the Awazu Plant, one of Komatsu's main Mother Plants, and an assembly line for wheel-type equipment such as wheel loaders and motor graders began operation. At the end of July, an additional assembly line for crawler-type equipment such as bulldozers and hydraulic excavators was also completed at the plant and production commenced. This has consolidated two previously separate assembly plants as well as assembly lines for wheel-type and crawler-type equipment under one roof. In addition, the adoption of the latest energy-saving, information and communication technology (ICT) and production technologies enables improved work efficiency and productivity and realizes a new environmentally conscious plant. By integrating two assembly lines, Komatsu has achieved a compact assembly line by efficiently using the work space and aims for a nearly two-fold increase in productivity per floor area of the new plant.



The new assembly plant features a revolutionary pit structure with power sources, cables and pipework and air-conditioning units installed inside the below-ground pit, enabling a completely flat floor. Additionally, the spacing between pillars has been expanded to a maximum of 32 m (105 ft) to secure adequate production space. Concurrently, Komatsu reduced the length of the assembly line by working closely with partner companies to promote the modularization of components.

The new assembly line at the Awazu Plant has introduced various types of new production equipment and has realized production reforms across all aspects of safety, legal compliance, quality, delivery and cost (SLQDC).



Wide spacing between pillars for a flexible floor layout and enhanced worker safety

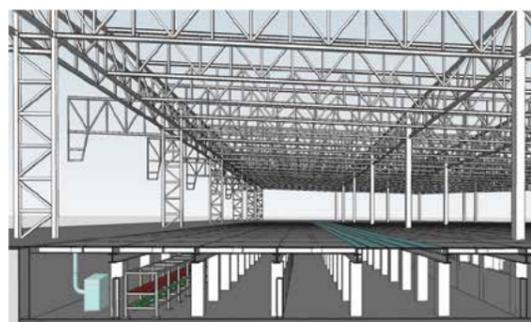
Wheel Loader Production Line at the New Assembly Plant

The new main production line for wheel loaders is currently divided into nine processes. There is also a sub-line for frame assembly and a sub-line for assembly work for booms and buckets.

The processes on the main production line can be flexibly rearranged, which allows processes to be divided and the number of workers increased. Motor graders are also assembled here.

Overview of the New Assembly Plant at the Awazu Plant

Total floor area:	31,900 m ² (343,372 ft ²) Production plant: 28,000 m ² (301,392 ft ²) Office: 3,900 m ² (41,980 ft ²)
Production items:	Medium-sized and small hydraulic excavators, medium-sized and small wheel loaders, medium-sized and small bulldozers, motor graders



Revolutionary structure with a below-ground pit for the entire factory floor and the wide spacing between pillars equivalent to an aircraft hangar



Efficient assembly on the mixed production line for wheel loaders and motor graders



An inspector wearing a red hard hat checks the mounting of all parts. Inspectors with different hard hat colors are assigned with respective responsibilities to ensure high quality.



To accurately respond to complex orders, the hose for the particular type of fuel automatically descends from above by calling up data.

Step by Step Assembly of Wheel Loaders

Sub-Line



After the frame is assembled on the frame assembly sub-line, the axles and fuel tank are attached. Then the front frame and rear frame are joined.



Main Line

1



The frame is set onto the main production line. A conveyor pulls the main line forward at a speed of 50 cm (20 in) per minute. A counterweight is mounted.

2



The engine is fitted and engine unit pipework is performed.

3



The engine hood is attached.

4



The cabin is mounted on the frame.

5



The boom and bucket are attached. A dramatic increase in productivity is achieved by transporting the boom and bucket with cranes set at different height levels. Previously, this process was handled by one large crane.

6



Equipment is supplied with fuel and hydraulic oil. The types and amounts of fuel differ by equipment model and option orders by customers. By scanning a bar code, the hose for the particular type of fuel automatically descends from above.

7



The drive shaft is attached. Workers enter the work pit and perform work operations from beneath the equipment body.

8



The tires are fitted. Two cranes and a specialized hoisting machine lift the tires to the wheel hubs and the wheel nuts are tightened with a specialized nut runner.

9



The equipment is virtually complete. The equipment is shipped after performing the last process of final inspection.

KOMATSU

2-3-6, Akasaka, Minato-ku, Tokyo 107-8414, Japan
<http://www.komatsu.com>

We welcome any comments from readers via email:
views@komatsu.co.jp

- Product photos in this newsletter may show optional equipment.
- Product specifications are subject to change without notice.
- Available models may vary by region or country.
- Models shown in this newsletter may be positioned for photographic purposes, with the bucket up. For safety reasons, please leave the equipment in a secure position.
- All rights reserved. No part of this newsletter may be reproduced without the prior written permission of Komatsu Ltd.
- The comments expressed in this newsletter are those of the contributors, and are not necessarily endorsed by Komatsu Ltd.