CATERPILLAR®

Service Repair Manual

Models

993K Wheel Loader

≪Product: WHEEL LOADER

Model: 993K WHEEL LOADER Z9K

Configuration: 993K Wheel Loader Z9K00001-UP (MACHINE) POWERED BY C32 Engine

Disassembly and Assembly 993K Wheel Loader Power Train

Media Number -KENR5817-03

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i03005554

Input Transfer Gears - Assemble

SMCS - 3159-016-IV

Assembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
В	1P-7405	Eyebolt	1
С	1P-0520	Driver Group	1
D	8T-5096	Dial Indicator Group	1

Note: Cleanliness is an important factor. Before assembly, all parts should be thoroughly cleaned in cleaning fluid. Allow the parts to air dry. Wiping cloths or rags should not be used to dry parts. Lint may be deposited on the parts which may cause later trouble. Inspect all parts. If any parts are worn or damaged, use new parts for replacement.



Illustration 1 g01528481

1. Lower the temperature of bearing cup (22). Install bearing (22) in the input transfer gear housing. Use a thickness gauge that has a thickness of 0.038 mm (0.0015 inch) or less to ensure that bearing cup (22) is seated.

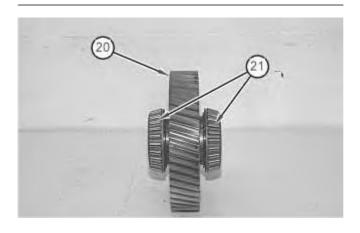


Illustration 2 g01562910

2. Raise temperature of bearing cones (21). Install bearing cones (21) on gear (20). Use a thickness gauge that has a thickness of 0.038 mm (0.0015 inch) or less to ensure that bearings (21) are seated.

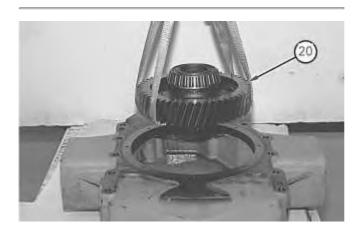


Illustration 3 g01562908

3. Use a suitable lifting device to install gear assembly (20) in the input transfer gear housing. The weight of gear assembly (20) is approximately 25 kg (55 lb).

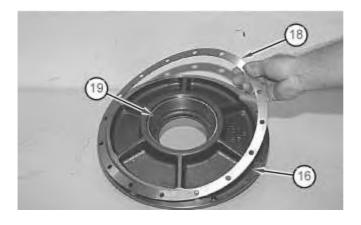


Illustration 4

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- 4. Lower the temperature of bearing cup (19). Install bearing cup (19) in cage assembly (16). Use a thickness gauge that has a thickness of 0.038 mm (0.0015 inch) or less to ensure that bearing cup (19) is seated.
- 5. Install the correct shims (18) on cage assembly (16).

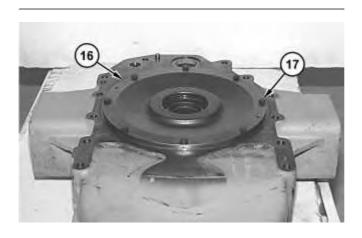


Illustration 5

g01562903

- 6. Install cage assembly (16) in the input transfer gear housing. Make sure that cage assembly (16) does not bind in the transfer case.
- 7. Install bolts (17). Tighten bolts (17) evenly. Tighten bolts (17) to a torque of $47 \pm 9 \text{ N} \cdot \text{m}$ (35 ± 7 lb ft).
- 8. Rotate the gear assembly for a minimum of three revolutions or rotate the gear assembly until the rolling resistance of the gear assembly diminishes to a steady level.



Illustration 6

9. Install Tooling (D) on the input transfer gear housing, as shown. Measure the end play of the gear assembly by lifting on the gear assembly.

Note: The desired end play for the gear is 0.152 mm (0.0060 inch). The maximum end play for the gear is 0.203 mm (0.0080 inch). The end play of the gear must be measured with a dial indicator in order to determine the correct gear end play.

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- 10. If the end play is not within the correct range, perform Steps 5 through 9 again. Add shims or remove shims in order to achieve the correct end play, if necessary.
- 11. Rotate the shaft after the correct end play is achieved. Make sure that the shaft turns freely in order to verify that the bearings are not binding.

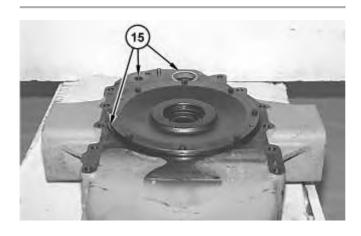


Illustration 7 g01562900

12. Install O-ring seals (15).

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