

Service Manual

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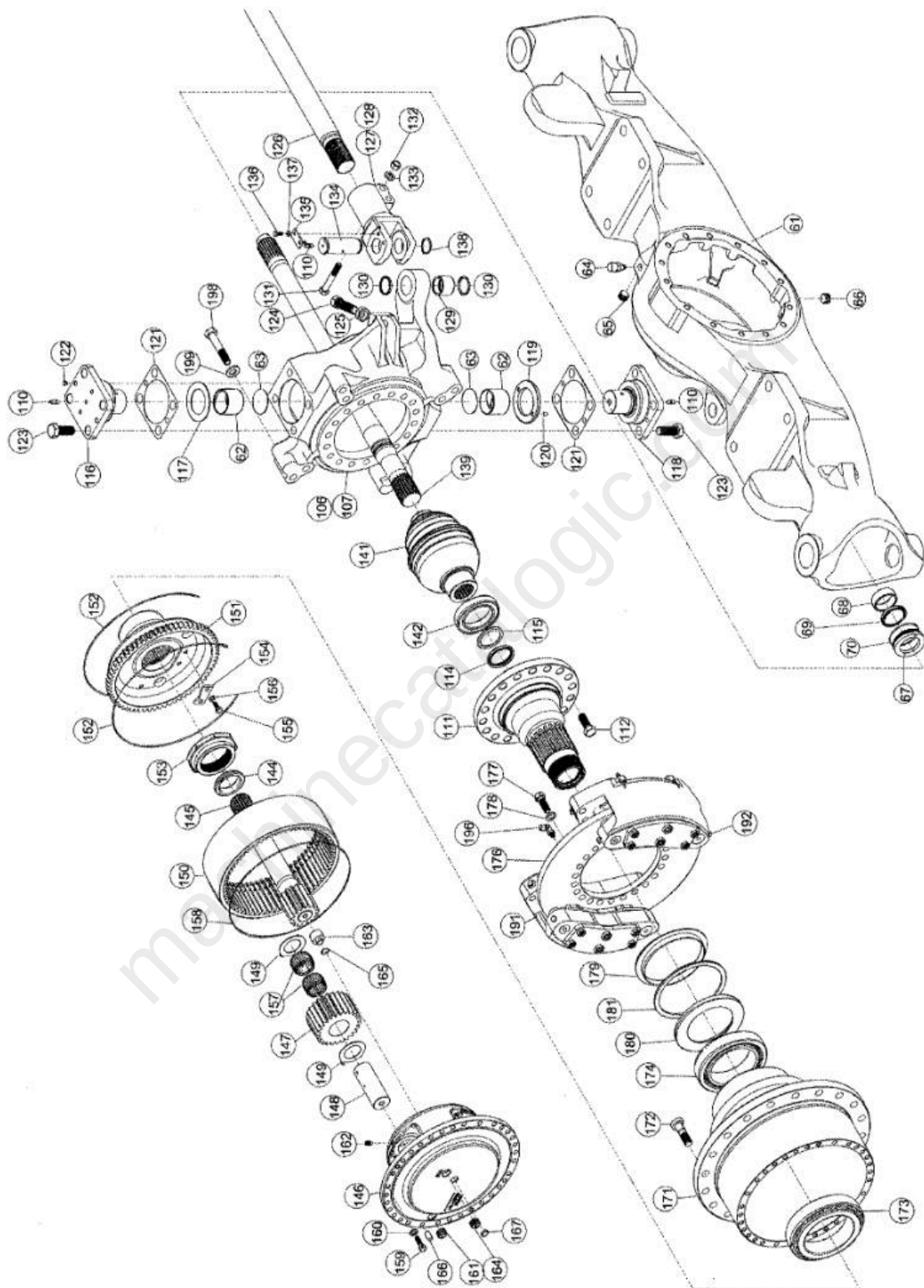
Driving Axle

SHP-S26.5

Model SHP-S26.5N

Structure and Function

1.5 Front axle exploded view (housing, speed reducer and brake)



W563-0181E006

Axle Assembly

5. Apply ThreeBond No.1360K or equivalent to bolt threads. Install king pins (upper and lower) with bolts.

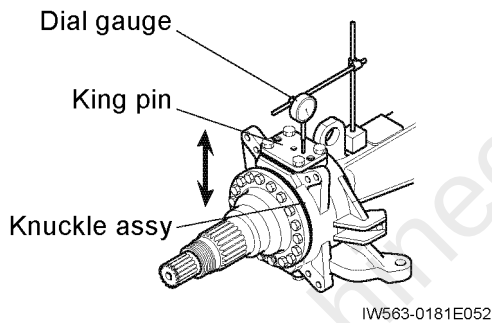
Tightening torque: 932 ± 49 N·m { 687 ± 36 ft·lbf}

6. Attach dial gauge on axle housing. Adjust dial gauge so that pointer is against surface of king pin. Read dial gauge reading while lifting knuckle up and down with jack.

Upper and lower play standard: 0 to 0.05 mm {0 to 0.002 in}

[NOTICE]

- ◆ Knuckle resistance to steering must be within hand force level.
 - Heavy: Increase shims.
 - Light: Decrease shims.
- ◆ When the standard cannot be satisfied, make adjustment by equally increasing/decreasing upper and lower shim thickness by 5/100.

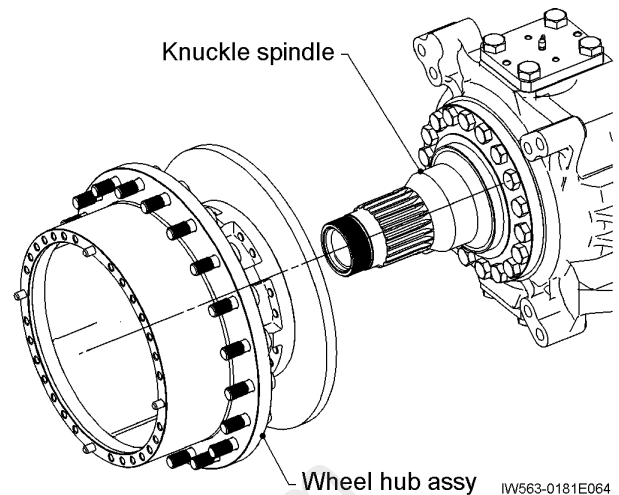


4.10 Installing wheel hub assy

[NOTICE]

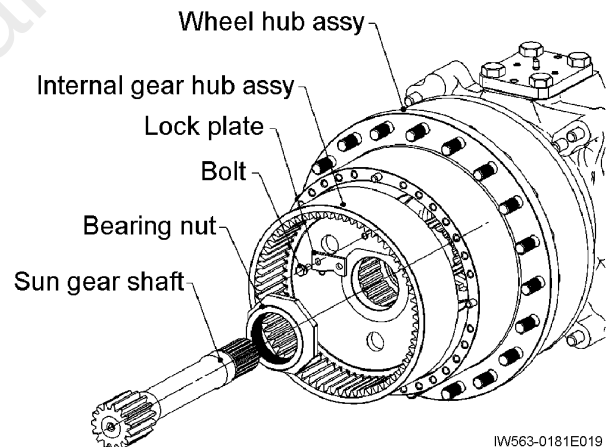
- ◆ While being careful not to damage the oil seal, install the wheel hub assy into the spindle.

1. Install wheel hub assy to knuckle spindle.



4.11 Installing internal gear hub assy

1. Install internal gear hub assy to knuckle spindle.
2. Tighten bearing nut while turning wheel hub. Tighten bearing nut until some resistance is felt when turning wheel hub. Then turn back bearing nut one-half to one turn.



[NOTICE]

- ◆ Apply ThreeBond No.1901 to bearing nut threads.
- ◆ To measure oil seal resistance, tighten the bearing nut hand tight.
- 3. Wind soft wire around the wheel hub and read force A when the wheel hub is turning with a spring balance. This is mainly resistance of oil seal.
- 4. Tighten the bearing nut and read force B (resistance of bearing and oil seal). Adjust amount of bearing nut tightening to make B - A within the standard value of:
 - 99 - 139 N (22.3 - 31.3 lbf) when the bearing is brand-new
 - 50 - 70 N (11.2 - 15.7 lbf) when the bearing is reused.

3. Cleaning

[NOTICE]

- ◆ Do not use mineral oil.

1. Metal parts

Wash metal parts in clean kerosene, and allow them to air dry.

2. Rubber parts

Clean rubber parts with alcohol or a clean wiper.

4. Inspection

1. Differential pinion and spider

Check the clearance between differential pinion ID and spider OD.

Standard value: 0.07-0.13mm (0.0028 - 0.0051 in)

Use limit: 0.23mm (0.0091 in)

2. Side gear and axle shaft

With axle shaft fixed, measure the spline play in the direction of rotation at the outer end of side gear with a dial gauge.

Standard value: 0.18-0.43mm (0.0071 - 0.0169 in)

Use limit: 0.63mm (0.0248 in)

3. Flange and drive pinion

With drive pinion fixed, measure the spline play in the direction of rotation at the outer end of the keyway in flange for propeller shaft installation with a dial gauge.

Standard value: 0.03 - 0.16mm (0.0012 - 0.0063in)

Use limit: 0.36mm (0.0142 in)

4. Drive pinion and ring gear

Check every gear tooth for contact pattern, wear and pitting. Slight stepped wear can be repaired with an oilstone or a fine file. If tooth surface is damaged, replace drive pinion and ring gear in a matched set.

5. Side gear and differential pinion

If the tooth surface of a gear is abnormally worn or damaged, replace it with a new one. Check the inside of differential case, thrust washers, spider, etc. If they are abnormally worn or damaged, replace them.

Replace side gears and differential pinions in a matched set, together with thrust washers. Using different combination of side gears and differential pinions that should be used only as a matched set and using old thrust washers together with new ones may cause a premature failure of those parts.

6. Bearing

Wash bearings in kerosene to thoroughly remove oil and grease, and check them for the following items. If defects are found, replace a bearing as a set including inner and outer races.

- Noisy, irregular rotation when turned by hand
- Flaw, crack, pitting corrosion, stepped wear on outer race
- Flaw, crack, pitting corrosion, partial wear on the raceway surface of inner race
- Deformation and partial wear of cage
- Discoloration (a sign of seizure) on rollers, inner race and outer race

If no defect is found, apply a thin coat of grease.

7. Others

Replace all parts that are found faulty.

Full Version Available

Tadano SHP-S26.5 and SHP-S26.5N Axle Service Manual

Tadano SHP-S26.5, SHP-S26.5N axle service manual covering differential, brake repair, adjustment and troubleshooting. 81-page PDF. Instant PDF download.

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