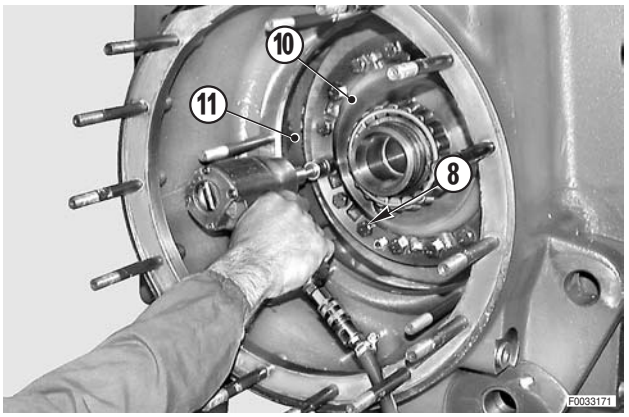
7 - Using a copper-headed hammer, drive the crown wheel (11) fully onto the differential unit (10), tapping lightly around the entire circumference.

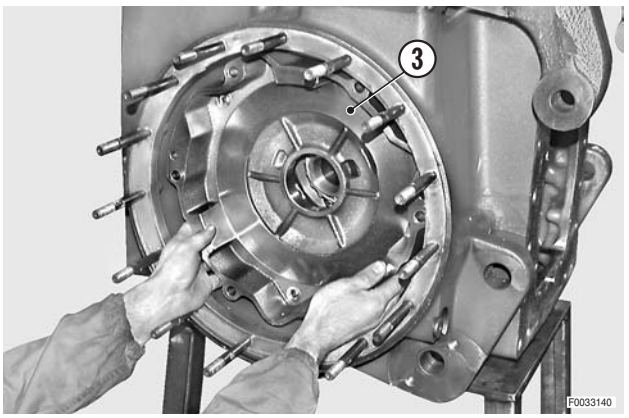
8 - Secure the crown wheel (11) with the bolts (8), tightening to the prescribed torque.

Nm Crown wheel bolts: 108±10% Nm

★ Tightening the bolts a little at a time, proceeding in diagonal sequence.



9 - Fit the R.H. flange (3) and secure in place.



10 - Calculate the increase in rolling torque attributable to the crown wheel and pinion, using the following formulae:

Cr = W1 + I with calibrated spring dynamometer
Cr = W + I with torsiometer

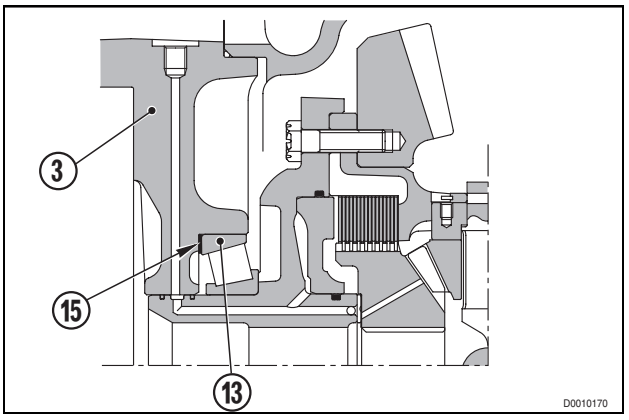
where: **I = 8.3–10.6 kg** for calibrated spring dynamometer
I = 2–4 Nm for torsiometer

Admissible measuring range:

a - with calibrated spring dynamometer:
4.1–25 kg + 8.3–16.6 kg = 12.4–41.6 kg

b - with torsiometer:
1–6 Nm + 2–4 Nm = 3–10 Nm

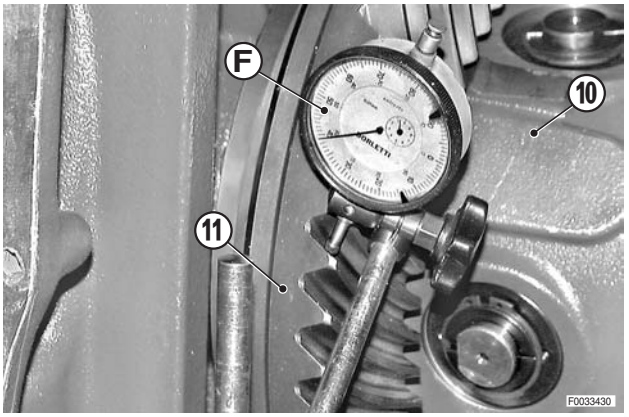
11 - If overall rolling torque (crown wheel and pinion) is not within the measuring range, remove the right hand flange (3) and the outer ring of the bearing (13), and add or take away shims (15) until the optimum torque value is obtained.



12 - Position a dial gauge "**F**" on a magnetic stand with the tip offered perpendicular to a tooth flank on the crown wheel (11), at the external diameter.
Preload the gauge by approx 4 mm (0.158 in) and reset; rotate the planet carrier (10) back and forth and check the backlash "**Z**" between pinion and crown wheel.

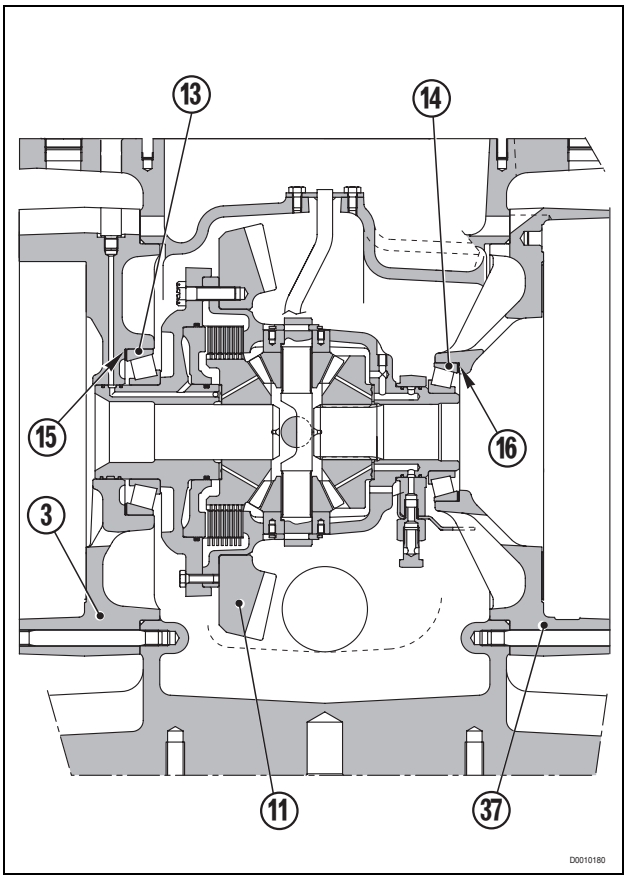
★ Normal backlash "**Z**":
0.25–0.33 mm (0.010–0.013 in.).

★ Take four measurements 90° apart and calculate the average.



13 - If backlash "**Z**" is less than 0.25 mm (0.010 in), remove one shim (15) from the outer ring of the right hand bearing (13) and add one shim (16) of the same thickness to the outer ring of the left hand bearing (14).
If backlash "**Z**" is more than 0.33 mm (0.013 in.), remove one shim (16) from the outer ring of the left hand bearing (14), and add one shim (15) of the same thickness to the outer ring of the right hand bearing (13).

★ The addition or removal of one shim measuring 0.1 mm (0.04 in) will produce a variation in backlash "**Z**" of approx 0.07 mm (0.002 in).



14 - To transfer shims, remove the flange (3) on the right, remove the crown wheel (11) from the differential, and take out the differential (10) so that the outer ring of the left hand bearing can be removed.

★ Place the thinnest of the shims nearer to the flanges (3) and (37).

15 - Reassemble and check the backlash "**Z**".

★ Repeat the step of transferring shims (15) and (16) from one side to the other until backlash registers within the permissible range of values.