

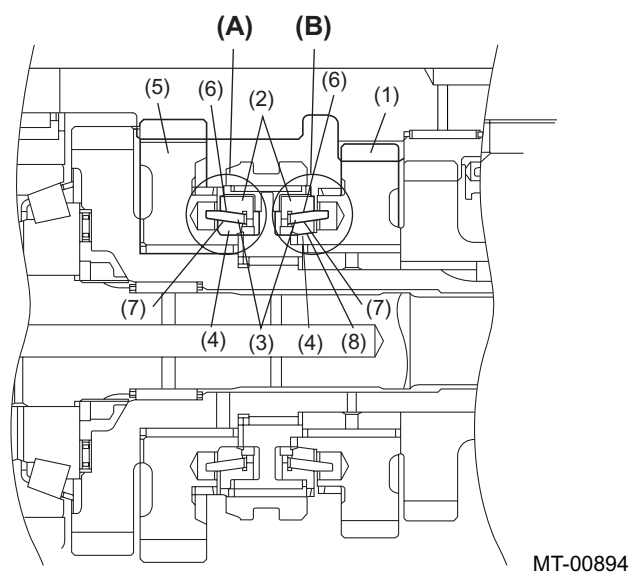
TRIPLE-CONE SYNCHRONIZER

MANUAL TRANSMISSION AND DIFFERENTIAL

3. Triple-cone Synchronizer

A: CONSTRUCTION

The triple-cone synchronizer has three frictional interfaces - in addition to the two coaxial interfaces between the synchronizer cone and the inner and outer balk rings (which are same as those with a double-cone synchronizer), it has a third frictional interface between the inner surface of the inner balk ring and the cone on the 2nd driven gear. Thanks to an increased friction force, the triple-cone type produces larger synchronizing power than a double-cone type synchronizer. The main components of the triple-cone synchronizer are the outer balk ring, synchronizer cone, inner balk ring, and 2nd driven gear's cone.



(A) Double-cone synchronizer

(B) Triple-cone synchronizer

(1) 2nd driven gear

(2) Outer balk ring

(3) Synchronizer cone

(4) Inner balk ring

(5) 1st driven gear

(6) Cone surface 1

(7) Cone surface 2

(8) Cone surface 3

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