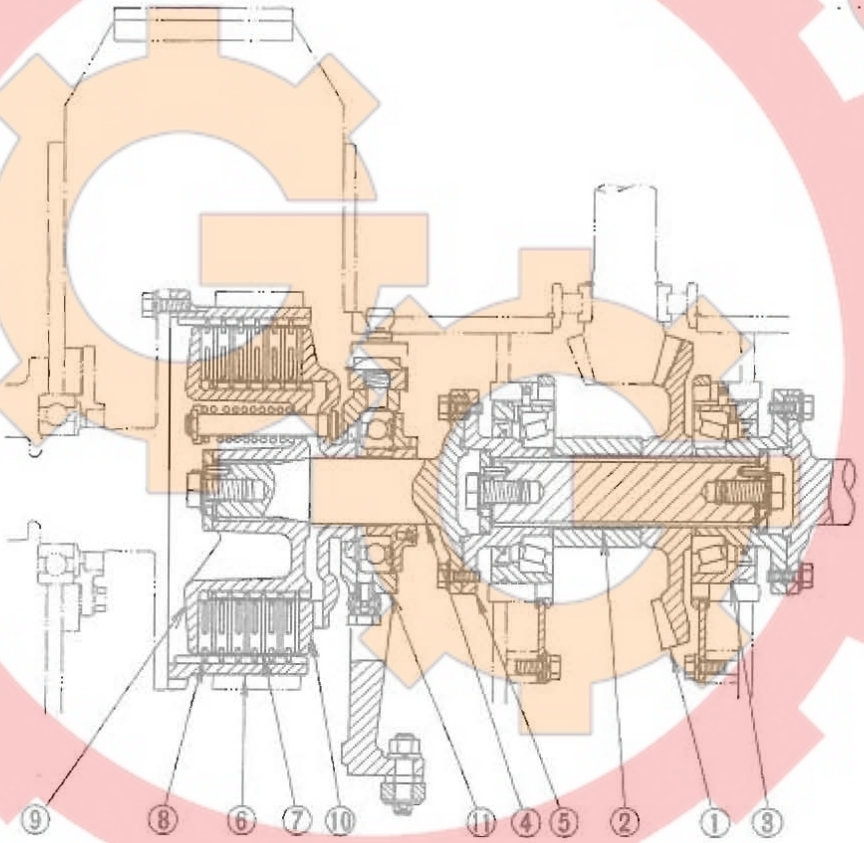
STEERING CLUTCHES AND BRAKES

The machine is steered by controlling the right-hand and left-hand steering clutches. The left-hand one is shown in the cross section given here. The clutch is of multi-disc dry type controlled from its own lever (steering lever).

Bevel gear (1) is splined to drive shaft (2), which is supported by cages (3) of two tapered roller bearings. Clutch shaft (4), bolted to drive shaft, carries the shifter (11) and, by its outer end, driving drum (9). Driven drum (6) is bolted to the flange of final-drive pinion. Between the two drums (6) (9) is positioned a stack of driving plates (7) and driven plates (8). These two kinds of plate alternate in the stack. Driven plates (8) are engaged with drum (6), and driving plates (7) with drum (9). The stack of these plates is normally kept compressed by spring-loaded pressure plate (10) to transmit drive to the final drive. The steering clutch is disengaged by operating the shifter (11) to move the pressure plate away from the stack.

Driven drum (6) is surrounded by a brake band. This band is actuated from the steering lever to brake the drum. The control linkage between the steering lever on the one hand and the clutch shifter and brake on the other is so arranged as to produce the disengaging action and braking action in a proper sequence. This connection will be discussed next.

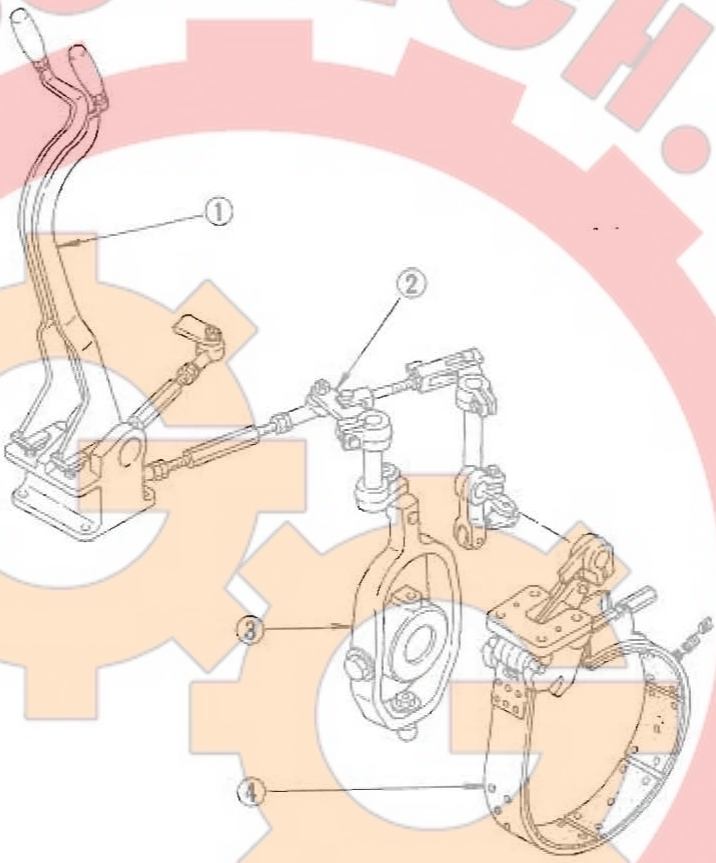


1-Bevel gear
2-Drive shaft
3-Bearing cage
4-Clutch shaft
5-Coupling
6-Driven drum
7-Disc plate
8-Driven disc plate
9-Driving drum
10-Pressure plate
11-Shifter

Steering clutch-and-brake – Cross section

STEERING CONTROL LINKAGE AND BRAKE PEDAL

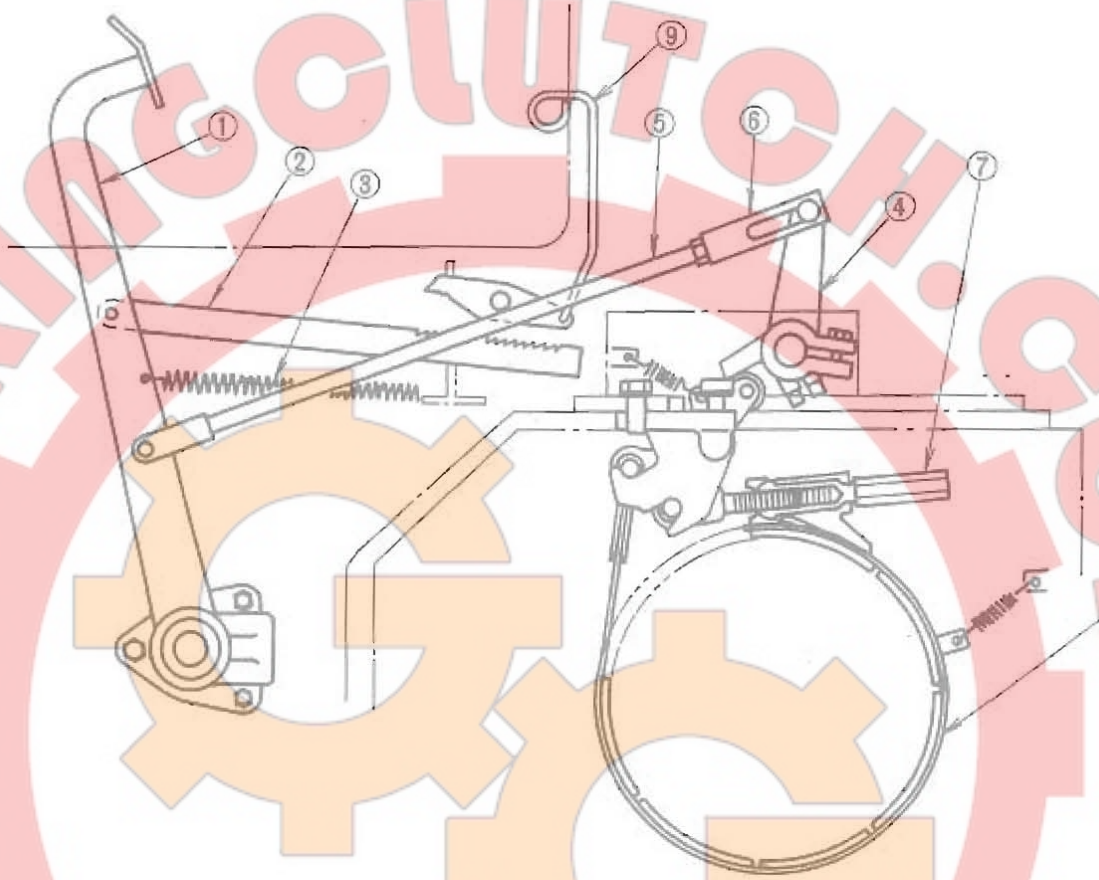
There are two steering levers (1) for the two steering clutches, right and left. Yoke (3), carrying the shifter and pivoting by its bottom part, is linked by lever (2) to steering lever through link rod. The lever for tightening the brake band (4) is similarly connected to steering lever. As the steering lever is pulled all the way to disengage the clutch, yoke (3) pulls the pressure plate away to interrupt the flow of drive through the steering clutch and then the brake-band actuating lever starts tightening the band (4). It is possible and permissible to pull the steering lever partially so that the clutch will disengage without braking.



1-Steering clutch lever
2-Link lever
3-Shifter yoke
4-Brake band

Steering control linkage

The brakes of two steering clutches can be applied by depressing the parking brake pedal. Depressing this pedal applies brake on both sides and at the same time pulling up lock lever (9) engages ratchet (2) and pawl and locks the pedal in depressed condition. Pressing down the lock lever disengages the pawl from ratchet to release brake.



1-Brake pedal
2-Ratchet
3-Return spring
4-Lever
5-Rod
6-Arm
7-Adjusting nut
8-Brake band
9-Lock lever

Parking brake linkage