
THE SHAFT BRAKING SYSTEM

INSTRUCTION MANUAL

VERSION: A1

DATE: AUG, 2020

Contents

1.	Tools	2
2.	Installation of the brake.....	2
3.	Adjustment of the stroke	3
4.	Notice	3
5.	Problems and solutions of the brake	4
6.	Installation and debugging of the lever of the brake micro switch.....	4
7.	Manual releasing device.....	4
8.	Remote releasing device.....	5
9.	Maintenance of the brake	7

NOTICE!!! Before adjusting the braking system, confirm the car's position to prevent strong tip and crouch driver of bottom.

WARNING! When the machine has load, do not adjust the two sides at the same time.

ATTENTION! When adjusting the braking system, ensure that one side brake has enough braking force, and then adjust the other side.

Safety illustration:

- [1] It is forbidden for non-professional personnel to operate the machine.
- [2] Before installation, usage and maintenance, read this instruction manual carefully, do as the manual says strictly to avoid equipment damage or person hurt.
- [3] Be cautious when operating, especially for elevators without the machine room, ensure the operator stand on the safe position.
- [4] The manual introduces adjustments for some components, it is forbidden to adjust unaccounted components.

1. Tools

Allen wrench 10, Allen wrench 14, feeler gauge, universal meter, noise meter, 0~70 Nm torque spanner.

2. Installation of the brake

Refer to fig. 1.1, the brake disc goes through the shaft with spline, the braking disc assemble can move in the axial direction, each friction plate and all contact surface should be clean, dry and free of oil, then assemble the armature, the moving iron with bolt installed on the motor base, screw all four bolts down. The air gap will be 0.35~0.45 mm after installation, when two moving irons are pulled in, the gap between the friction plate and the base installation surface will be 0.15-0.20 mm.

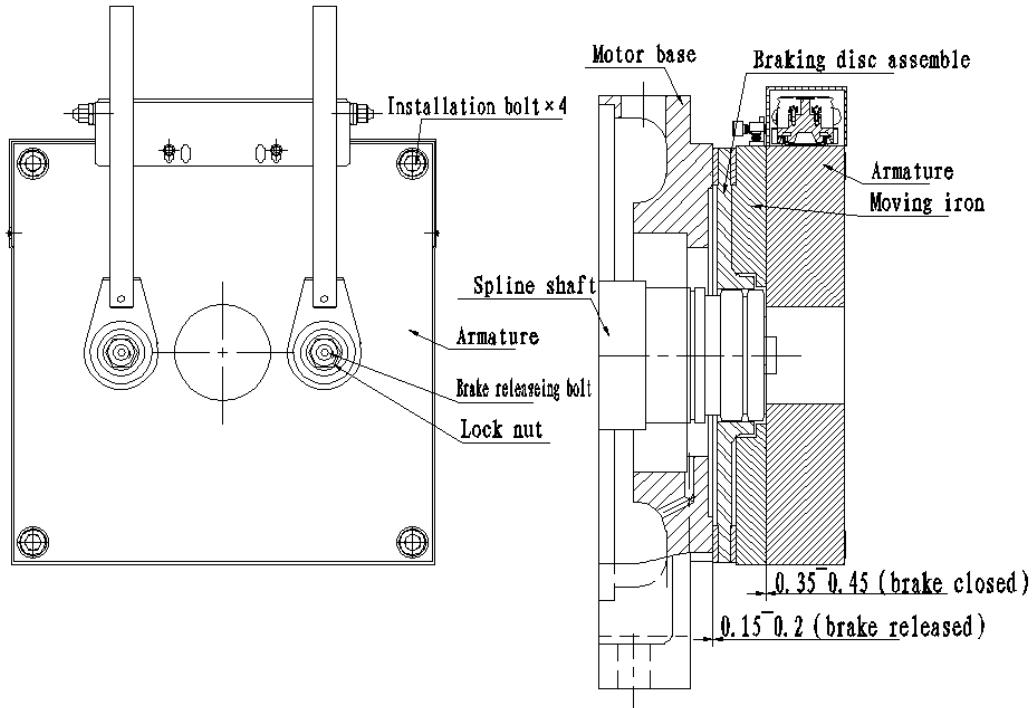


Fig. 1.1

3. Adjustment of the stroke

The air gap of brake is fixed and there is no need to be adjusted.

4. Notice

- [1] When adjust the bolts, you should adjust it diagonally.
- [2] Screw all four bolts down, every bolt must be 60 Nm locked.
- [3] When adjusting the bolts, the adjust range must be as small as possible, after installation, check the air gap and the gap between friction plate and the base installation surface with feeler gauge .
- [4] You'd better not adjust the lock nuts at the releasing bolt.
- [5] Brake installed in the ventilation, shelter and avoid direct sunlight to brake, effectively avoid oil into the rooms of the brake, Brake effectively grounded; Check the brake clearance, inspection release can perform the brake and release, check whether the micro switch is correct.
- [6]When the adjustment is over, you should do test to check the braking force (such as the elevator static load test), lock all the adjusting points, make corresponding markers before put into operation.

5. Problems and solution of the brake

[1] The braking system doesn't work

a)The winding voltage of the braking system in the field is too low

Check braking system power supply voltage electrical connection

b)The brake coil is broken

Replace the corresponding brake

[2] Braking torque doesn't meet the requirements

Unclean friction plate and motor base installation surface

Clean all friction surface and involved parts.

[3] There is no feedback braking system

Micro switch is broken.

Change the micro switch

6. Installation and debugging of the lever of the brake micro switch

NOTICE: The stroke of the lever and the micro switch contact has been adjusted well before shipping. It does not need to readjust normally. If it needs to be adjusted, please call professional personnel.

7. Manual releasing device

When there are problems while the elevator running or the persons are kept in the car for the power off, you may use manual releasing device to operate.

NOTICE: The manual releasing device should be operated by 2 professionals, and make sure the power is shut down first.

Usage of the manual releasing device:

One person use accessory spanners of machine, respectively put each spanner on both camshafts, then move the force spanner as shown in the following figure, the brake can be released.

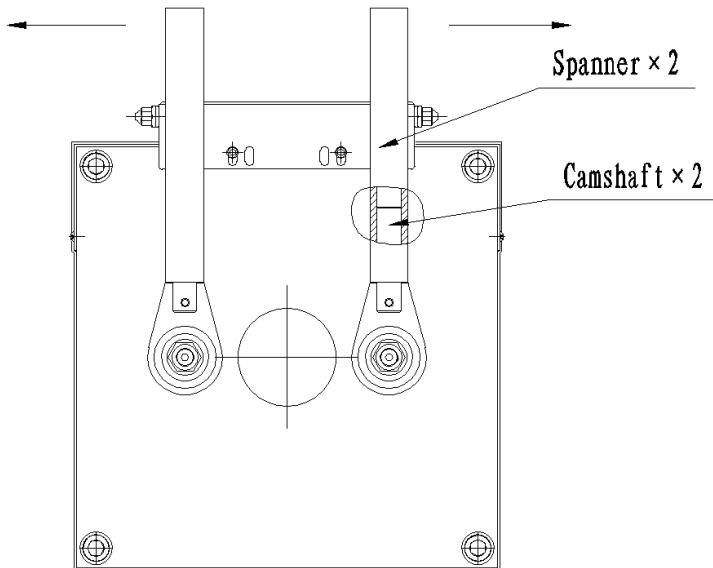


Figure 1.2

8. Remote release device

When the elevator is installed without the machine room, it is necessary to use the remote release device for emergency operation when the elevator is in the process of operation, or because of power failure caused by the situation.

Note: The handle should be installed in a safe location, can only be operated by professional personnel, ensure the operation cut off the main power supply, to strictly prevent the brake opened causes the elevator to slip danger.

When installing a remote release device, the brake shall not be adjusted without permission;

Remote release device has been adjusted, no special circumstances do not adjustment have fixed on the brake device of the machine.

1. Remote release device and the main parts

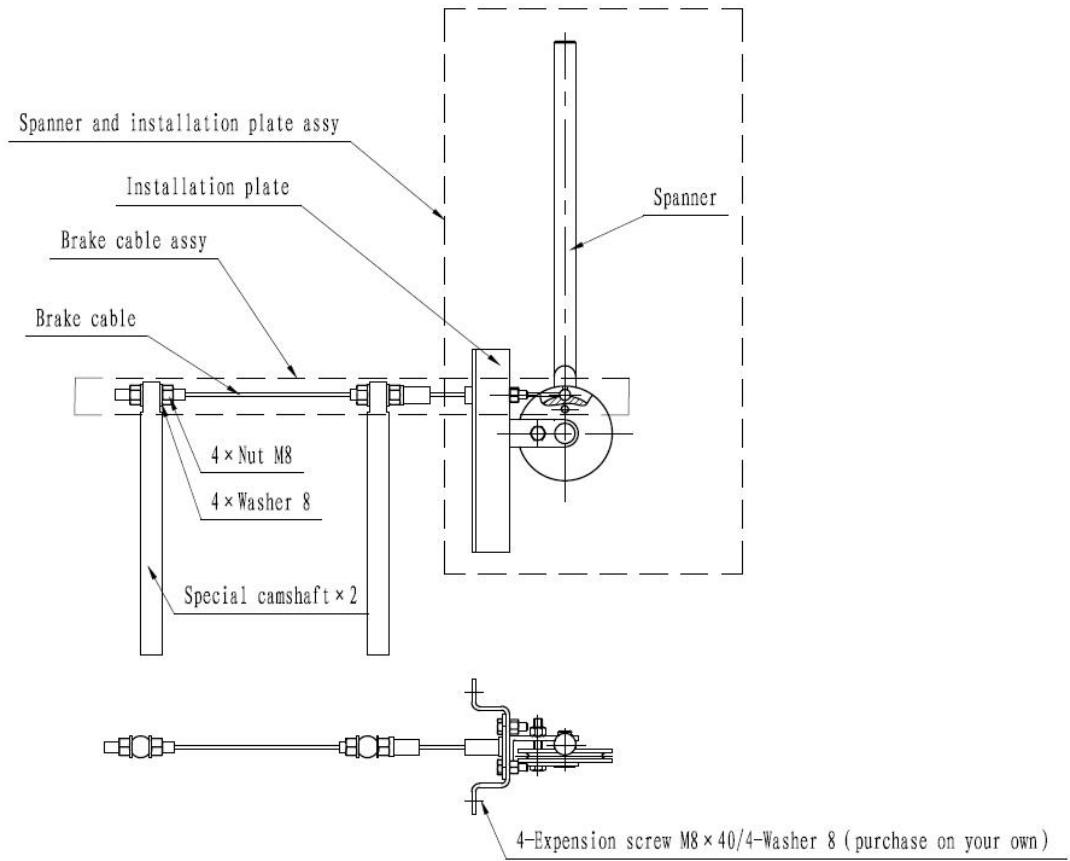


Figure 1.3

2. The remote release device profile

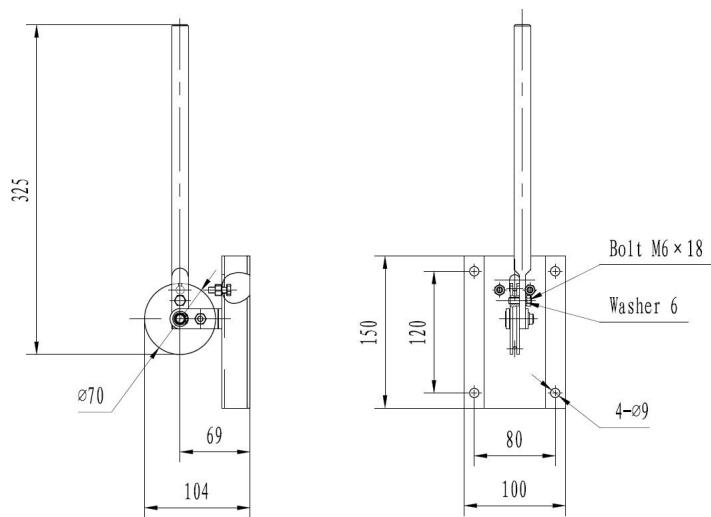


Figure 1.4

3.The installation of remote release device

- 1) The loose brake soft pipe pass through the through hole of the mounting plate , and are arranged on the wheel which is fixed on the mounting plate. The relative position of the installation of wheels and handle as figure 1.4, the wheel is ensured to be in the inner side of the handle , so that the rope groove on the wheel can be matched with the through hole of the mounting plate , after the loose brake soft pipe is installed, use the M6×18 bolt and washer to lock the wheel with the handle ;
- 2) As figure 1.3, pass the other side of loose brake soft pipe through special camshaft(already installed on the brake), clamp these two spanner with four M8 nuts and washers 8;
- 3) The mounting plate 4 is securely fixed in the control cabinet or installed in a locker with sufficient space.

4.Remote release device debugging instructions

- 1) Pull down the spanner, the brake will be loosed within approximately 150 degrees, pay attention to the speed of the car and the car flat, The flat layer is completed and the handle is loosened immediately.
- 2) When finished, all parts must be restored.

5.Notice

After assembly must be tested several times to ensure the movement of the device flexible, Automatic reset, If there is a problem, the connection must be adjusted to meet the requirements, otherwise it is forbidden to use the device.

9. Maintenance of the brake

When the braking pad has a little worn, it would add the brake air gap and make it impossible to open gate, when there is much worn of it, the brake would not work. When its thickness is less than 15 mm, replace it.

NOTICE! The static load test method: add 150% rated load in the car, observe the base installation surface for ten minutes, there should have no skid between the braking disc and the installation surface.

WARNING! If the braking force test is unqualified, then the elevator is forbidden to be electrified, otherwise it would occur accidents.