

Operation Manual

Steel jack



Note: The owner/operator must read carefully and understand all the information presented here before operation.

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1. Introduction

This steel jack contains three series of HVS, HKB and HAS. It has a simple structure and a convenient operating, which make it stable and quick to lift loads. Compared with the hydraulic jack, it has no potential danger such as descent with a load caused by oil leakage. Not only can it lift the load with its head but also with its lateral dental plate. As it adopts a mechanical structure for lifting loads, its safety factor is quite high. So it is widely used for all kinds of vehicles, equipment maintenance and other lifting work such as in mines and laneways.

When using the HAS series jack, adjust the lateral dental plate first, then you can lift the load quickly.

This jack is not used to support the loads for long time. Please replace with other supporters when the loads being lifted to the appointed position in case of accidents.

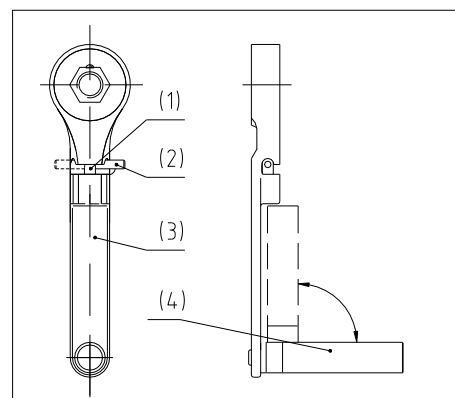
2. Warning

- 2.1 The jack must be operated by proficient person.
- 2.2 Operate on a level and firm floor.
- 2.3 Prohibit using this jack if there is nobody watching over.
- 2.4 Prohibit overloading in case of accidents.
- 2.5 Prohibit operating as being tilted in case of accidents.
- 2.6 Prohibit loading off centre in case of accidents.
- 2.7 Prohibit putting your hands or feet under the moveable parts of the jack.
- 2.8 Do not put anything between the jack and the load in case of accidents.
- 2.9 Make daily checking before using the jack. Prohibit using the jack if it is faulty or damaged.
- 2.10 The stroke of lifting heavy loads can't be too long.
- 2.11 When using the HAS series jack, the capacity on the lateral dental plate is 70% of the rated capacity.

3. Operating Instruction

- 3.1 Pull down the handle pipe (4).
- 3.2 Operate the safety turning handle (3) as shown:
Push the locating pin to the right, turn the turning handle clockwise. Then the jack ascends.
Push the locating pin to the left, turn the turning handle anticlockwise. Then the jack descends.
- 3.3 Swivel the handle without load. The jack should lift without blocking and gears match well.
- 3.4 Place the jack at a proper position and lift the load. (With its head or lateral dental plate) Prohibit putting anything between the jack and the load. Swivel the handle clockwise. (Before using the safety handle, you must push the locating pin (1) to the right.) When the handle is stressed, stop swiveling and check whether the lifting is stable and tilted, and the handle is locked (Does not turn reversely). Readjust the stressed point and correct the error if something is abnormal. Swivel the handle clockwise to lift the load for about 1–2cm. Repeat the checking above

Safety turning handle



- (1). Ratchet wheel pin (2). Locating pin
(3). Turning handle (4). Handle pipe

to confirm the safety, then lift the load to the required height. (The stroke of lifting shouldn't be very long.)

3.5 When descending, turn the turning handle anticlockwise slowly to lower the load. (When operating the bar, be sure that the locating pin should be pushed to the left as shown in the foregoing fig.)

3.6 When not use, lower the jack to the bottom and keep it at a safe place in case of injures.

4. Maintenance

4.1 Make daily checking before using the jack. Turn the turning handle unloaded. The jack should ascend and descend without blocking, gears meshes well and the ratchet wheel locks well.

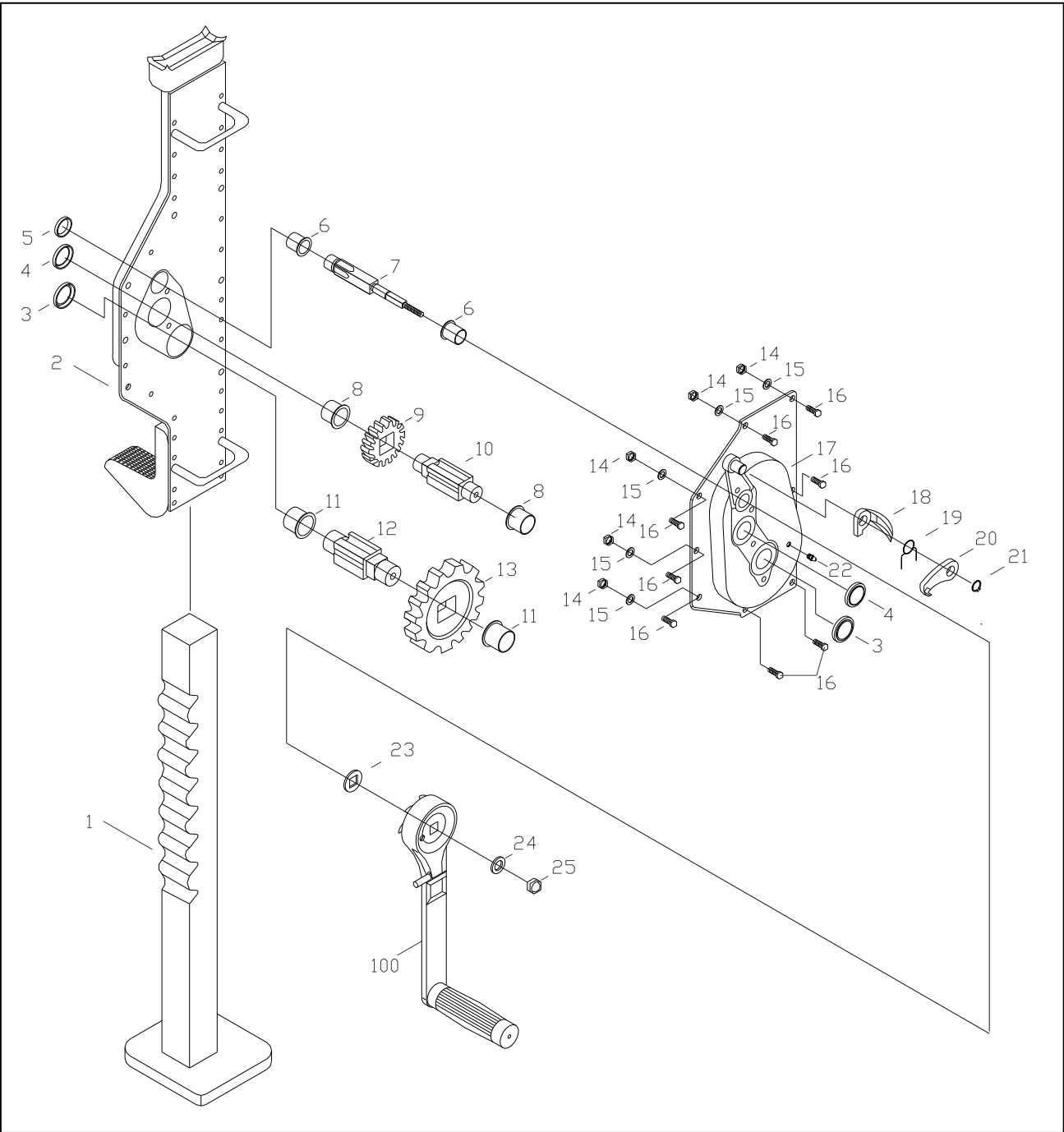
4.2 Prohibit exposing the steel jack. Protect it against damp.

4.3 Exam this steel jack every six months. Disassemble all the parts (except turning handle) and clean them with diesel oil. Check the gears for wearing, distortion, cracks and so on, (A tilting of gear mating surface is normal as affected by side loading of the lateral dental plate.) and change the faulty parts timely. Lubricate the junction surface, sliding parts and axis joints of gears after finishing checking. Assemble the jack and make an unloaded checking.

5. Technical Parameter

Model	Safe Working Load (kg)	Height Of Jack Body (mm)	Lifting Height (mm)	Height Of Claw In Lowest Position (mm)	Net Weight (kg)
HVS-1.5	1500	725	350	65	12
HVS-3	3000	725	350	70	20
HVS-5	5000	725	300	70	29
HVS-10	10000	800	300	80	42

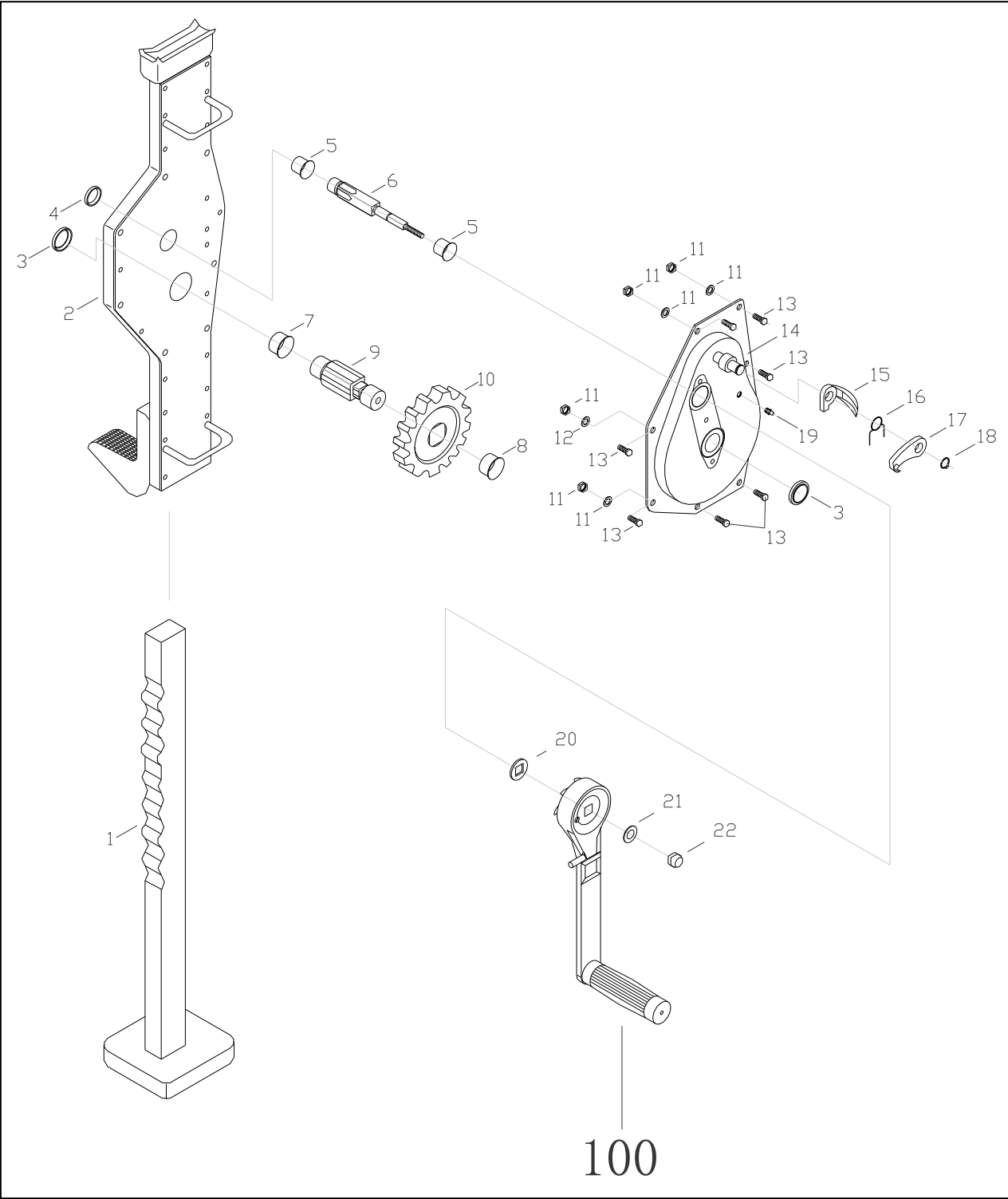
6. Exploded View (5t and 10t)



7. Part list (5t and 10t)

PART NO	DESCRIPTION	QTY	CODE OF PART	
			5t	10t
1	Rack	1	5-01	10-01
2	Gear case assembly	1	5-02	10-02
3	Axis III pinion cover	1	5-03	10-03
4	Axis II pinion cover	2	5-04	5-03
5	axis I pinion cover	2	5-05	10-05
6	Axis I pinion bush	2	5-06	10-06
7	Axis I pinion	1	5-07	10-07
8	Axis II pinion bush	2	5-08	10-08
9	Axis II gear	1	5-09	10-09
10	Axis II pinion	1	5-10	10-10
11	Axis III pinion bush	2	5-11	10-11
12	Axis III pinion	1	5-12	10-12
13	Axis III gear	1	5-13	10-13
14	Nut M8	8	5-14	10-14
15	Washer 8	8	5-14	10-15
16	Bolt M8	8	5-16	10-16
17	Front cover assembly	1	5-17	10-17
18	Rachet 2	1	5-18	5-18
19	Torsional spring	1	5-19	5-19
20	Rachet 1	1	5-20	5-20
21	Retainer ring 14	1	5-21	5-21
22	Nipple	1	5-22	5-22
23	Handle shim	1	5-23	10-23
24	Washer 12	1	5-24	10-24
25	Nut M12	1	5-25	10-25
100*	Handle assembly	1	5-100	10-100

8. Exploded View (1.5t and 3t)

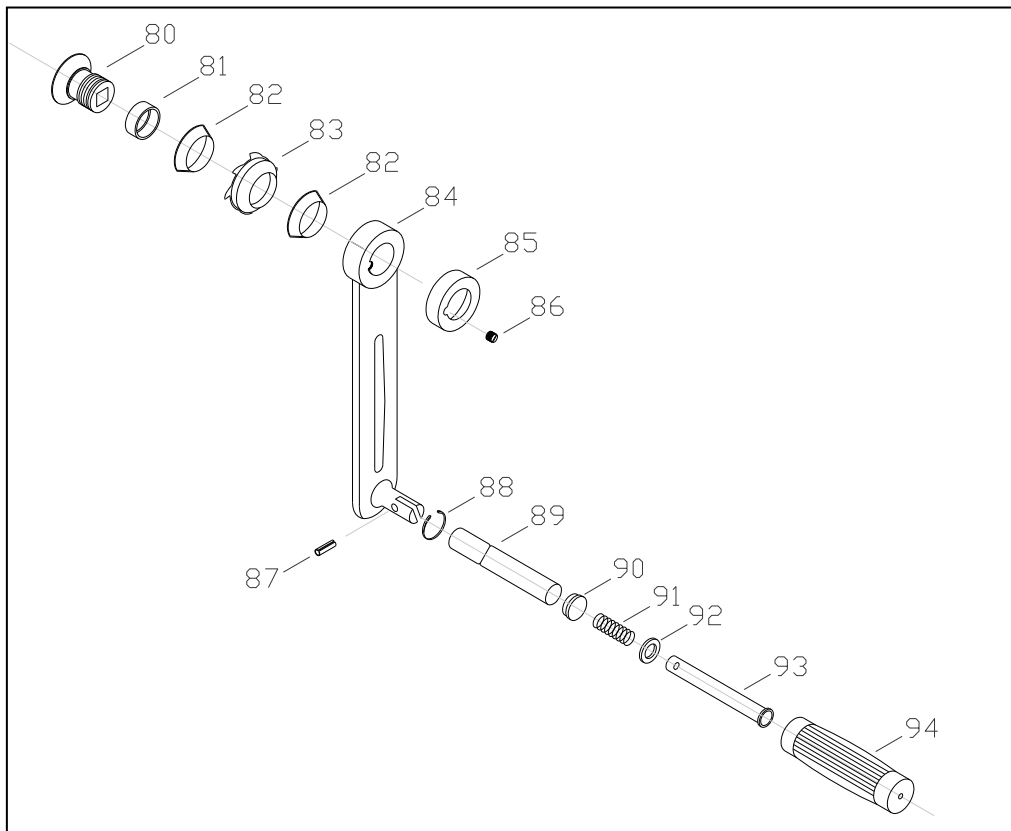


9. Part list (1.5t and 3t)

PART NO	DESCRIPTION	QTY	CODE OF PART	
			1.5t	3t
1	Rack	1	1.5-01	3-01
2	Gear case assembly	1	1.5-02	3-02
3	pinion cover	1	10-05	5-04
4	pinion cover	1	5-05	5-05
5	pinion bush	2	3-05	3-05
6	Axis I pinion	1	1.5-06	3-06
7	pinion bush	1	1.5-08	5-08
8	pinion bush	1	5-06	5-08
9	Axis II pinion	1	1.5-09	3-09
10	Axis II gear	1	1.5-10	3-10
11	Nut M8	7	1.5-11	5-14
12	Washer 8	7	1.5-12	5-15
13	Bolt M8	7	1.5-13	5-16
14	Axis II pinion cover	1	5-04	5-04
15	Front cover assembly	1	1.5-15	3-15
16	Rachet 2	1	5-18	5-18
17	Torsional spring	1	5-19	5-19
18	Rachet 1	1	5-20	5-20
19	Retainer ring 14	1	5-21	5-21
20	Nipple	1	5-22	5-22
21	Handle shim	1	5-23	5-23
22	Washer 12	1	5-24	5-24
23	Nut M12	1	5-25	5-25
100*	Handle assembly	1	5-100	5-100

10. Detail of Handle Assembly (Part No. 100)

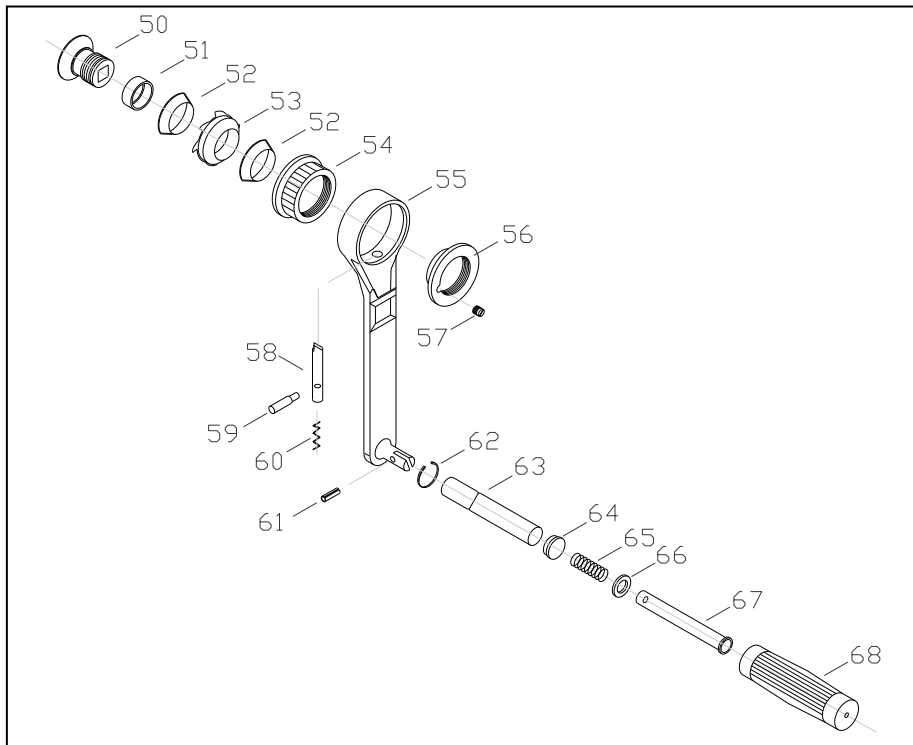
10.1 Exploded View of 100* -1 Standard Handle Assembly



10.2 Part list of 100* -1 Standard Handle Assembly

PART NO	DESCRIPTION	QTY	CODE OF PART			
			1.5t	3t	5t	10t
80	Lock screw	1		5-50		10-50
81	Nylon spacer sleeve	1		5-51		10-51
82	Braking disc	2		5-52		10-52
83	Ratchet wheel	1		5-53		10-53
84	Turning handle	1		5-84		10-84
85	Ratchet wheel cover	1		5-85		10-85
86	Bolt M8	1		5-57		5-57
87	Elastic straight pin 6	1		5-61		10-61
88	Retainer ring	1		5-62		10-62
89	Handle pipe	1		5-63		10-63
90	Pressure spring seat	1		5-64		10-64
91	Handle pressure spring	1		5-65		10-65
92	Washer	1		5-66		10-66
93	Guiding pole	1		5-67		10-67
94	Handle sheath	1		5-68		10-68
100*-1	Handle assembly	1		5-100-1		10-100-1

10.3 Exploded View of 100*-2 Safety Handle Assembly



10.4 Part list of 100*-2 Safety Handle Assembly

PART NO	DESCRIPTION	QTY	CODE OF PART			
			1.5t	3t	5t	10t
50	Lock screw	1	5-50			10-50
51	Nylon spacer sleeve	1	5-51			10-51
52	Braking disc	2	5-52			10-52
53	Ratchet wheel	1	5-53			10-53
54	Ratchet wheel hub	1	5-54			10-54
55	Turning handle	1	5-55			10-55
56	Ratchet wheel cover	1	5-56			10-56
57	Bolt M8	1	5-57			5-57
58	Ratchet wheel pin	1	5-58			10-58
59	Locating pin	1	5-59			559
60	Pressure spring	1	5-60			560
61	Elastic straight pin 6	1	5-61			10-61
62	Retainer ring	1	5-62			10-62
63	Handle pipe	1	5-63			10-63
64	Pressure spring seat	1	5-64			10-64
65	Handle pressure spring	1	5-65			10-65
66	Washer	1	5-66			10-66
67	Guiding pole	1	5-67			10-67
68	Handle sheath	1	5-68			10-68
100*-2	Handle assembly	1	5-100-2			10-100-2