

# Instruction Manual

## WINCH STACKER

CAPACITY: 500kg

LIFTING HEIGHT: 1500mm



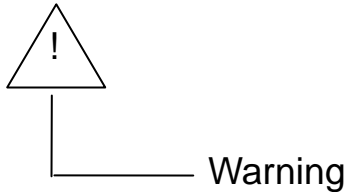
**Note:** Owner/Operator must read and understand this instruction manual before using the winch stacker.

# IMPORTANT

Please read, understand and follow these safety rules and operating instructions before operating this machine.

Only trained and authorized personnel should be permitted to operate this machine.

## 1. Safety Rules



Failure to obey the instructions and safety rules in this manual may result in death or serious injury.

### 1.1 Do Not Operate Unless:

#### 1) You learn and practice the principles of safe machine operation contained in this operating manual.

- Avoid hazardous situations.
- Always perform a pre-operation inspection.
- Always perform the function tests prior to use.
- Inspect the workplace.
- Only use the machine as a material lift.

#### 2) You read, understand and obey:

- Manufacturer's instructions and safety rules
- Employer's safety rules and worksite regulations
- Applicable governmental regulations

### 1.2 To Avoid Hazardous Situations:

#### 1) Fall Hazard

Do not use a personnel lifting platform or step.

#### 2) Tip-over Hazards

Do not overload the winch stacker.

Do not raise the load unless the machine is on a firm, level surface.

Do not move the machine with a raised load, except for minor positioning.

Do not tilt the machine back with a raised load.

Do not operate the machine in strong or gusty winds.

Prior to use, check the work area for drop-offs, holes, bumps, debris, unstable surfaces or other possible hazardous conditions.

Do not subject the machine to horizontal force by raising or lowering a fixed or overhanging load.

User refer to prEN1005-3 for further guidance.

If the load exceeds the actual operational capacity, the operator must be assisted by one or more persons.

The machine can be only used in the light environment of at least 50LUX.

### **3) Collision Hazards**

Do not lift if the load is not properly centered on the forks.

Check the work area for overhead obstruction or other possible hazards.

Do not stand under or allow personnel under the machine when the load is raised.

Do not lower the load unless the area below is clear of personnel and obstructions.

### **4) Bodily Injury Hazards**

Do not grasp the cable.

Keep hands and fingers away from pulleys, the carriage and other potential pinch points.

Recommended operators to wear safety shoes and gloves.

Do not put the feet under the forks to avoid any damages when using the machine.

### **5) Improper Use Hazard**

Never leave a machine unattended with a load. Unauthorized personnel may attempt to operate the machine without proper instruction, creating an unsafe situation.

### **6) Damaged Machine Hazards**

Do not use a damaged or malfunctioning machine.

Do not use a machine with a worn, frayed, kinked or damaged cable.

Do not use a machine with less than 4 wraps of cable on the winch drum when the carriage is fully lowered. If you see the red mark on the cable, at least 4 wraps are on the winch drum.

Conduct a thorough pre-operation inspection prior to each use.

Be sure that all decals are in place and legible.

Maintain proper lubrication of the winch.

### **7) Crushing Hazard**

Do not release grasp on the winch handle until the brake is locked.

### **8) Lifting Hazard**

Use proper lifting techniques to load or tip the machine.

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### **9) Other items**

When pushing the machine on the rough floor the force will be bigger.

To avoid overloading, the operating force will increase and reach to 400N when reaching to the nominal load.

Pay attention to the balance of the goods to avoid their turning over when lifting them.

Do pay attention to avoid the goods turn over towards the back when using the machine

on a slope.

## **2. Pre-operation Inspection**

The operator should perform a visual inspection prior to each work shift to discover if anything is wrong with a machine.

**2.1 Be sure that the instruction manual is complete, legible and available for reference.**

**2.2 Be sure that all decals are legible and in place.**

**2.3 Checking the following components or areas for damage and improperly installed, loose or missing parts:**

- Winch and Related Components
- Base Components
- Legs
- Rollers
- Frame
- Cable Anchor
- Cable and Pulleys
- Casters
- Forks
- Brake System
- Handle
- Nuts, Bolts and Other Fasteners

**2.4 Check entire machine for:**

- Dents or damage
- Corrosion or oxidation
- Cracks in welds or structural components

**2.5 Be sure that there is a minimum of 4 wraps of cable around the winch drum when the carriage is fully lowered.**

## **3. Function Tests**

The operator must follow the step-by-step instructions to test all machine functions.

### **3.1 Test the Brake Operation**

- 1) Press down on the foot pedal to lock the brake.**
- 2) Push the machine. The machine should not move.**

3) **Pull up on the foot pedal to release the brake.**

4) **Push the machine. It should now move freely.**

### **3.2 Test the Winch Operation**

1) **Rotate the winch handle clockwise to raise the carriage.**

The carriage should rise to the top of the frame. The carriage should move smoothly, free of hesitation and binding.

2) **Rotate the winch handle counterclockwise to lower the carriage.**

The carriage should lower into the frame. The carriage should move smoothly, free of hesitation and binding.

*\* There are several layers of cable on the drum. During the course of raising and lowering, the noise the cable makes will change, as more, or less cable is wound onto the drum. This change in sound is perfectly normal. It will not affect the functions of the machine.*

#### **Note:**

*A damaged or malfunctioning machine must never be used. If damage or malfunctions are discovered during pre-operation inspection or function tests, the machine must be tagged and removed from service.*

*Repairs to the machine may only be made by a qualified service technician and according to the manufacturer's instructions.*

*After repairs are completed, the operator must perform a pre-operation inspection and function test again before putting the machine into service.*

*Not do modifications shall be carried out which adversely affect any safety requirements and the compliance of the truck with this standard (EN1757-1).*

## **4.Workplace inspection**

To operate the machine safely, the operator should inspect the workplace prior to moving the machine to the workplace.

#### **Be aware of and avoid the following hazardous situations:**

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- 1) Drop-offs or holes
- 2) Bumps and floor obstructions
- 3) Debris
- 4) Overhead obstructions and high voltage conductors
- 5) Hazardous locations
- 6) Inadequate surface support to withstand all load forces imposed by the machine

- 7) Wind and weather conditions
- 8) All other possible unsafe conditions

## **5. Operating Instructions**

The working grade of the winch stacker: 1BM.

Warning: pay attention to the winch lever kick back when in lifting will cause a risk.

- The machine shall not be used on gradients due to possible excessive efforts and loss of control.
- The machine shall not be used in places insufficiently illuminated.
- The machine shall not be used to lift or to transport persons.
- The machine shall not be used as a vehicle jack.
- The extremity of fork arms shall not be used as a lever to lift a load.
- The machine shall not be used in applications where a risk of exceeding the rated capacity exists.
- The machine shall not be used in applications where a risk of unintentional movement exists.
- The machine shall not be used for handling free swinging loads.
- The machine shall not be travel with its fork arms in the upper position except for loading and unloading operations.
- The machine shall not be have direct contact with foodstuffs.
- The machine shall not be used in a potentially explosive atmosphere.
- Using the machine for any purpose other than lifting material is unsafe.

### **5.1 Raising and Lowering Load**

- 1) Centre the load on the forks.**
- 2) Raise the load by firmly grasping the winch handle and rotating it clockwise. Do not allow the cable to wind unevenly onto the winch drum.**
- 3) Lower the load by firmly grasping the winch handle and rotating it counterclockwise. After lowering to the desired position, loosen the winch handle.**

### **5.2 Moving Machine with a Load**

It is best to move the machine without load. Moving a raised load should be restricted to positioning for loading and unloading. If it is necessary to move the machine with a raised load, understand and obey the following safety rules:

- 1) Area is level and clear of obstructions.

- 2) Load is centred on the forks.
- 3) Avoid sudden starts and stops.
- 4) Travel with load in the lowest possible position.
- 5) Keep personnel away from machine and load.
- 6) Do not tilt the machine back with a raised load.
- 7) The machine shall be moved slowly and smoothly.
- 8) While moving no part of the fork arms or of the load shall come into contact with an obstacle.
- 9) During moving neither the fork arms nor the load shall rest upon an obstacle.

## 6. Maintenance, repair & placement of this machine:

The maintenance, repair shall be carried out by qualified mechanic under the instruction of manufacturer.

### 6.1 Routine maintenance

Routine maintenance of the machine will prolong the working life of this machine. For the frequency of maintenance please refer to the following table.

Items	Inspection Content	Cycle		
		1month	6months	12months
*Chassis	Check the loading parts		●	
*Front and rear roller	Check wearing of the bearing and bearing housing	●		
*Turning	Check whether it turns properly	●		
*Winch device	Check whether the transmission of gears is proper	●		
*Lifting Steel Wire	Check the extension rate and wearing	●		
*Brake	Check whether it functions properly	●		
*Moveable parts	Check lubrication & wearing	●		

### 6.2 Placement while store

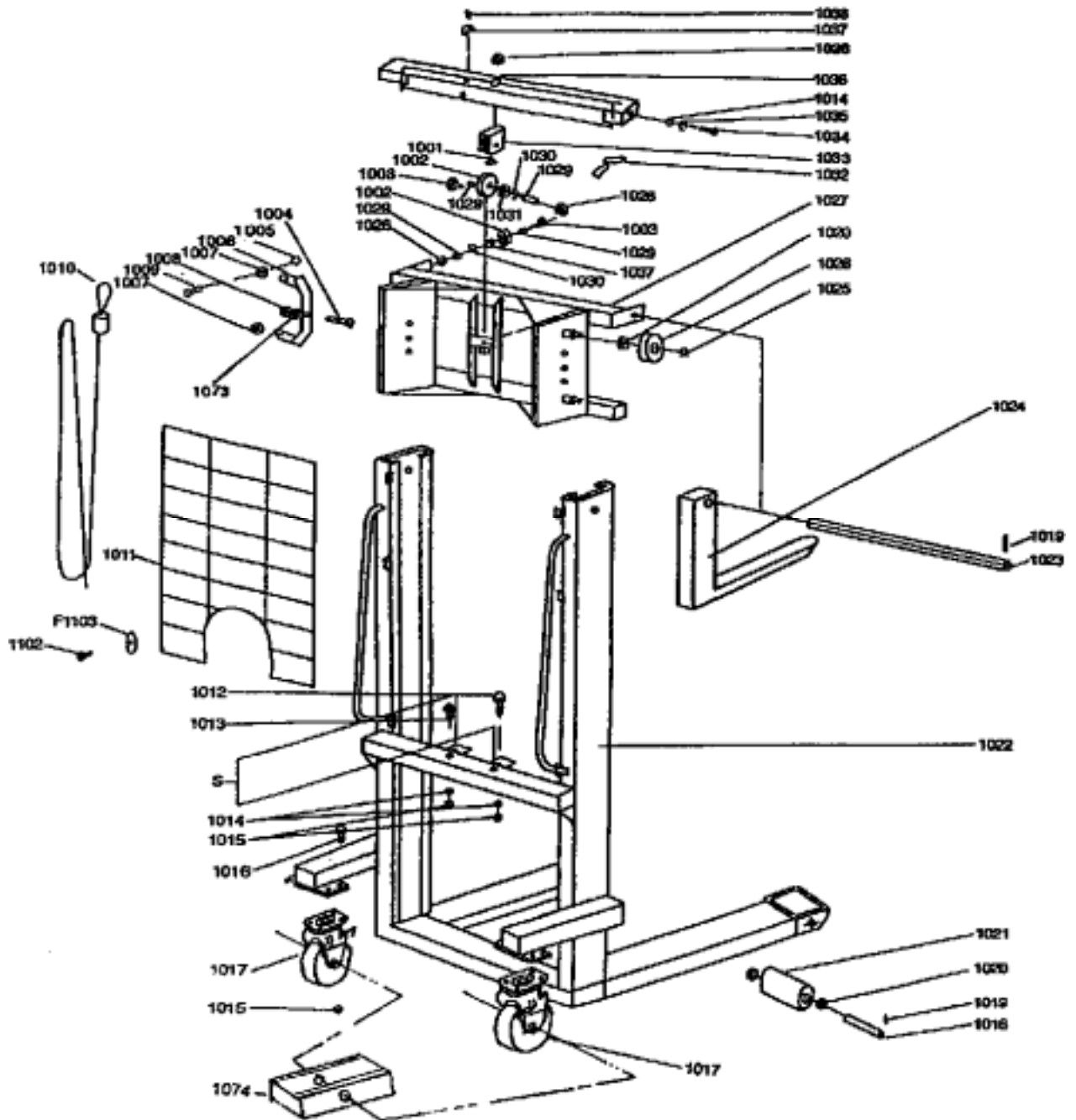
After work is over, the forks of the stacker shall be placed to its lowest position. The stacker shall be kept on firm flat floor without any load. During placement, the brakes of the stacker shall be on.

## 7. Specifications

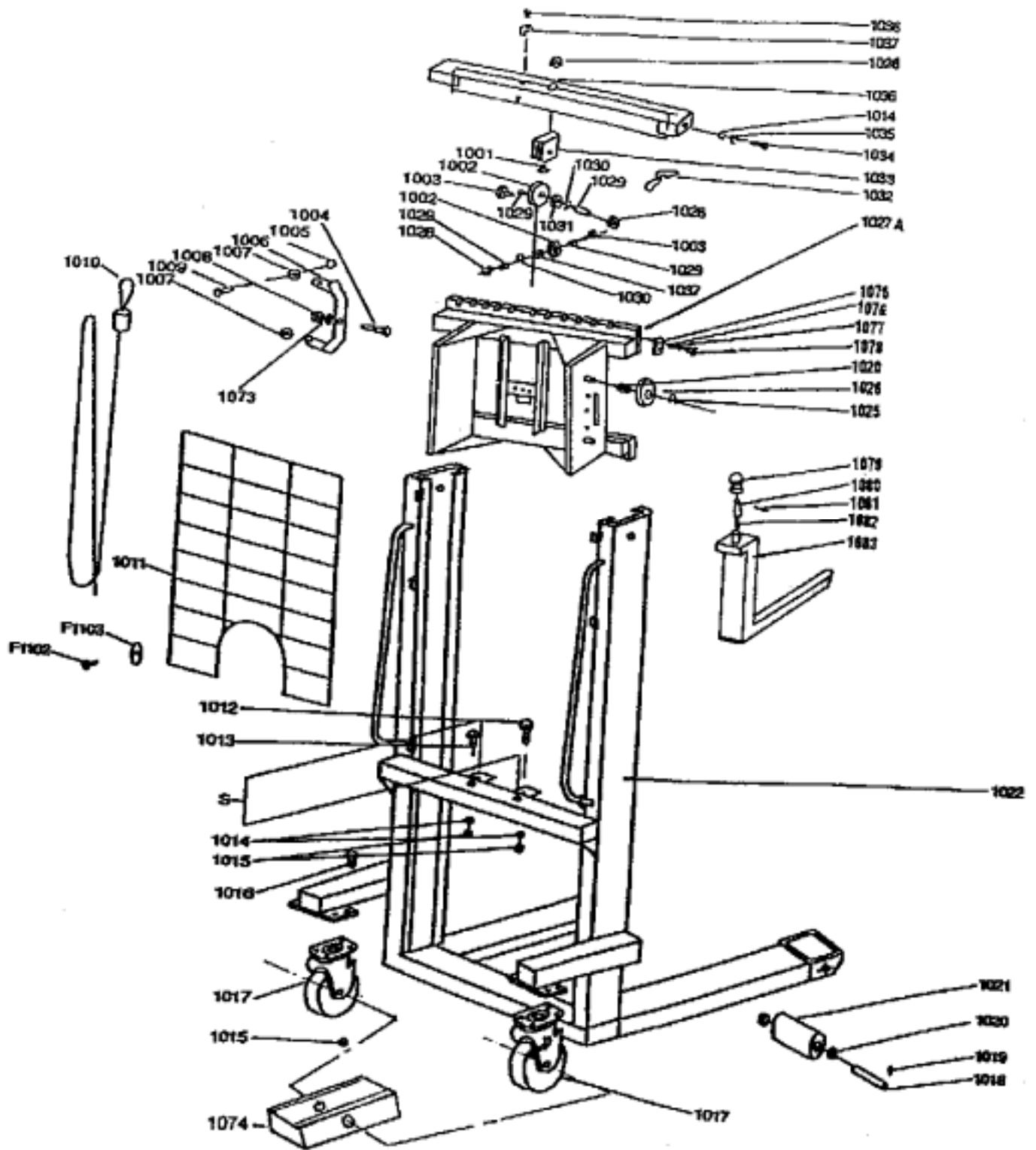
<b>Model</b>	<b>WS50</b>
Capacity	500kg
Load center	500mm
Maximum fork height	1500mm
Min fork height	60mm
Lifting height range	90~1500mm
Fork width	70mm
Fork length	1000mm
Max. Overall fork width	690mm
Load roller	80 × 47mm
Steering wheel	150mm
Overall length	1525mm
Overall width	725mm
Overall height	2030mm
Net weight	146kg
Cable dia	4.2mm
Cable capacity	1960Mpa



# Frame of Adjustable Fork



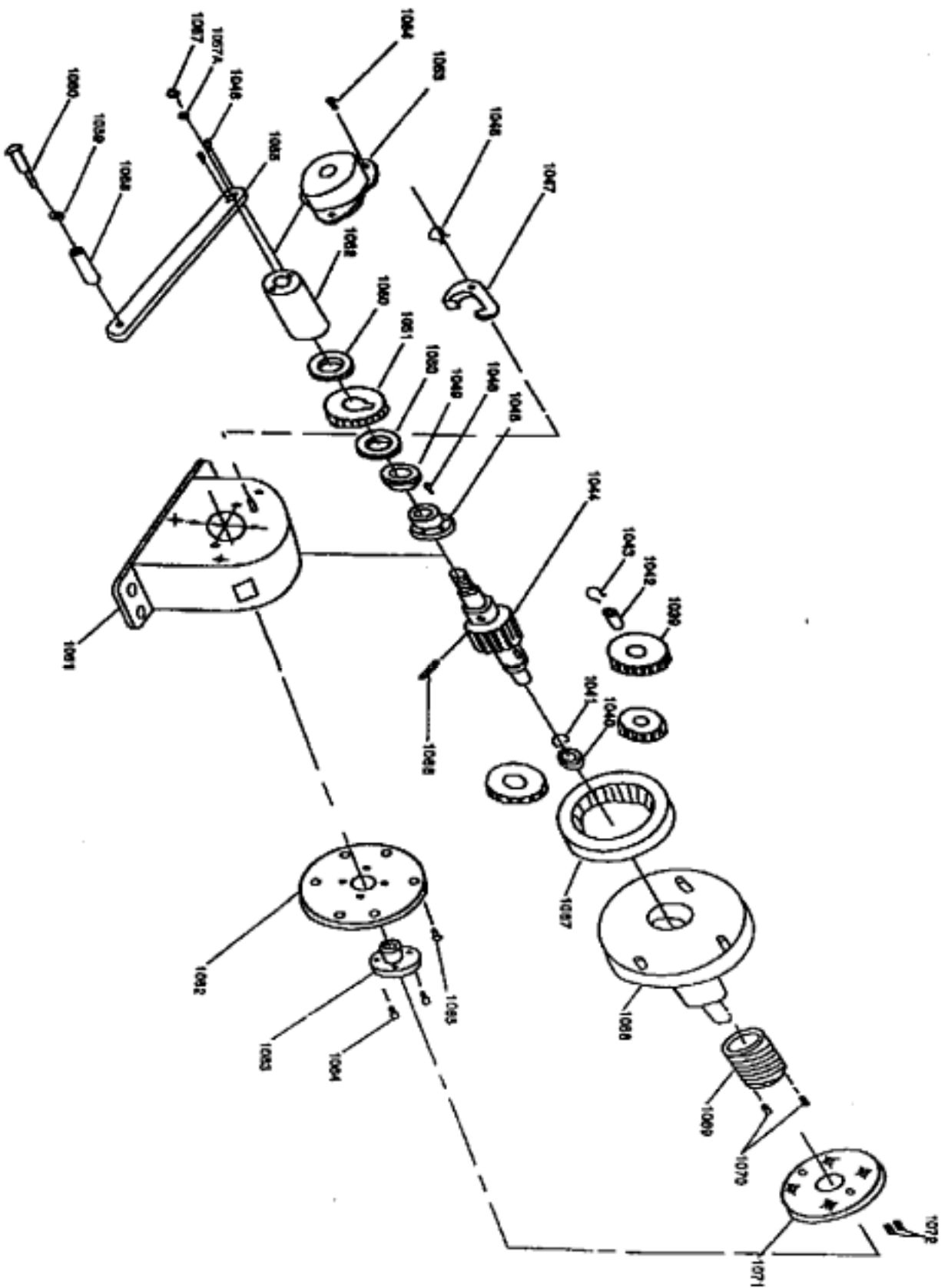
# Frame of Adjustable Fork with Lock



## Parts List of Frame

No.	Description	Q'ty	No.	Description	Q'ty
1001	Bolt	1	1027, 1027A	Carriage Assembly	Each 1
1002	Pulley	2	1028	Nut	2
1003	Axle	2	1029	Bushing	4
1004	Bolt	2	1030	Retaining ring	2
1005	Retaining ring	4	1031	Bearing	1
1006	Bracket Assembly	2	1032	Pulley cover	1
1007	Small pulley	4	1033	Roller	1
1008	Nut	2	1034	Bolt	2
1009	Axle	4	1035	Spring washer	2
1010	Cable Assembly	1	1036	Top plate	1
1011	Net cover	1	1037	Seal plate	1
1012	Bolt	8	1038	Bolt	1
1013	Bolt	2	1074	Steering wheel cover	2
1014	Washer	10	1075	Seal plate	2
1015	Nut	12	1076	Plain washer	4
1016	Bolt	8	1077	Spring washer	4
1017	Steering wheel	2	1078	Bolt	4
1018	Axle	2	1079	Handle	2
1019	Spring pin	4	1080	Pin	2
1020	Bearing	4	1081	Pin	2
1021	Guide pulley	2	1082	Spring	2
1022	Frame	1	1083	Fork	2
1023	Carriage rod	1	F1102	Screw	6
1024	Fork	2	F1103	Washer	6
1025	Retaining ring	4	1073	Washer	2
1026	Roller	4			

# Hand Device



## Parts List of Hand Device

No.	Description	Q'ty	No.	Description	Q'ty
1039	Gear	3	1057A	Nut	1
1040	Bearing	2	1057	Nut	1
1041	Retaining ring	1	1058	Handle axle	1
1042	Axle bushing	3	1059	Washer	1e
1043	Retaining ring	3	1060	Screw	1
1044	Axle	1	1061	Case body	1
1045	Flange bushing	1	1062	Back plate	1
1046	Screw	4	1063	Back plate cover	1
1047	Pawl	1	1064	Hexagon socket screw	4
1048	Retaining ring	1	1065	Screw	6
1049	Pin bracket	1	1066	Pin	1
1050	Washer	2	1067	Ring	1
1051	Ratchet	1	1068	Bracket	1
1052	Handle bushing	1	1069	Drum	1
1053	Roller cover	1	1070	Screw	2
1054	Screw	3	1071	Plate	1
1055	Handle	1	1072	Screw	2