

MARUZEN

HYDRAULIC
HAND CUTTER
MODEL CH130

INSTRUCTION MANUAL

&

PARTS LIST



MARUZEN KOGYO CO., LTD.

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Introduction

Thank you so much for purchasing Maruzen, Hydraulic Hand Cutter, "CH130." This manual describes instructions and directions in use so that you can handle the hand cutter safely and effectively. Read and understand all of the instructions and safety information in this manual before operating or servicing the hand cutter. If you do not follow the instructions and precautions, you may have serious accidents. Hence keep this manual at hand in order that every user can read it periodically. If you lose this manual or make it dirty, order one from our agents or us immediately. When you hand over the hand cutter to someone, attach this manual and ask him or her of reading it thoroughly. If you have any questions, feel free to contact our agents or us. When you replace parts, order the genuine parts from our agents or us. If you do not use them, you may make the performance and durability degrade outstandingly. Therefore use the hundred-proof parts by all means.

Points to Notice

If you do not follow the points below, you may come in for injury, death and damage of the machine.

For Safe Use

Wear a suitable working clothes.

Wear the following safe protective equipments without fail.

1. **Helmet:** Protect head from chips and wound substance while cutting.
2. **Dustproof Glasses:** Protect eyes from chips and wound substance while cutting.
3. **Dustproof Mask:** Protect lungs from dust while cutting.
4. **Safety Boots:** Protect feet from injury by cutting disc and falling objects.
5. **Thick Gloves:** Protect hands from burn injury by touching high temperature section or bruise.
6. **Ear Plugs or Covers:** Protect ears from damage by noise.

Unless following the points above, accidents may occur.

Do not work under the conditions below

When you cannot concentrate work because of over fatigue, sickness and on medication.

When you are on a drunk

When you have ache and injury in arms, legs, back, etc.

Unless following the points above, serious accidents may occur.

Caution for Work Place

Keep people away from the work place since debris are scattered.

Set up a barrier.

Unless following the points above, serious accidents may occur.

Do not touch the body with bare hands as it becomes hot.

Do not touch the body with bare hands and be careful so as not to have skin touched to it since the oil temperature rises while the machine is working.

Unless following the points above, you may have burn injury.

When you lend the machine to someone:

Please instruct him or her to read and understand this manual thoroughly before operation.

Unless following the points above, serious accidents may occur.

While at work

Keep inflammable objects away from the work place.

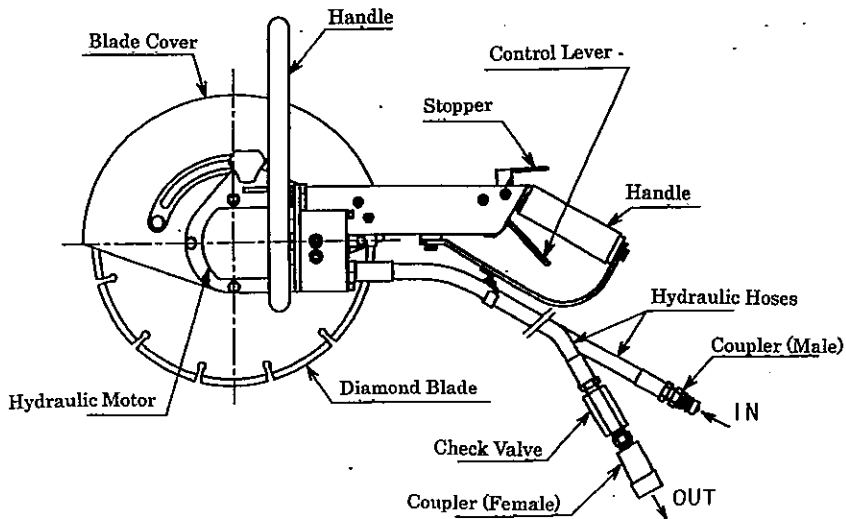
Unless following the points above, fatal accidents may occur by fire.

The Application Use of The Hand Cutter

1. Connect the hand cutter to the hydraulic power unit with the hydraulic hoses. Hold the handle to use the following work:
 - 1) Cutting concrete and asphalt
 - 2) Cutting rock, brick and cast-iron pipes
2. Do not use the hand cutter under the following manner:
 - 1) Do not connect the hand cutter to any hydraulic power units with oil flow of over 25 L/min.
 - 2) Do not attach a blade with its diameter of different specification.
 - 3) Do not use the hand cutter for other purpose than cutting specified objects.

Part Name & Specifications

CH130 Parts Name

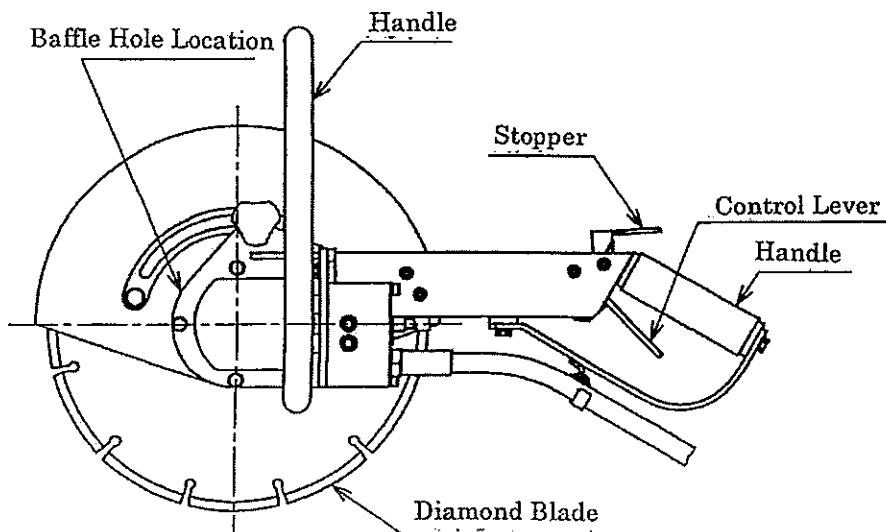


Specifications

| | |
|-------------------------|---|
| Dimension: | L602 × W207 × H315mm (Excluding hydraulic hoses and blade) |
| Weight: | 10.3Kg (Without Blade) |
| Hydraulic oil pressure: | 17.2 Mpa (Max.) |
| Rated oil flow: | 20.5 L/min |
| Max. oil flow: | 25L/min |
| Rotational Frequency: | 3200 rpm (20.5 L/min) |
| Torque: | 8.4 N · m |
| Blade: | Dry type diamond blade 12 inches External diameter: 305mm Hole Diameter: 22mm |
| Connection port: | 3/8-inch coupler |

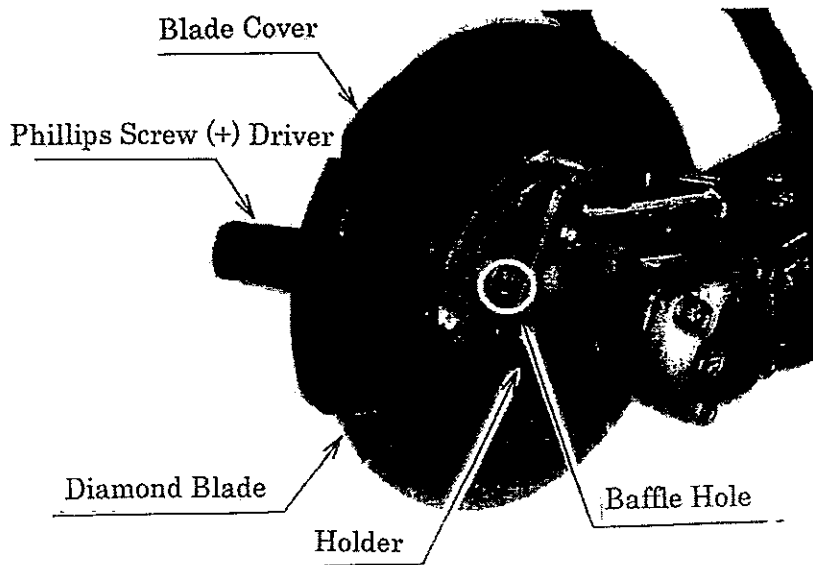
How to Use The Hand Cutter

1. Connect the hand cutter to a hydraulic power unit with hydraulic hoses.
2. Hold the handle of the hand cutter firmly by both hands. Turn on the control lever to start the hand cutter by rotating the blade.
3. Put the hand cutter onto an object while stabilizing the rotation speed of the blade in order to cut it smoothly.
4. Release the control lever to stop rotating the blade.



How to Attach A Blade

1. Disconnect the hand cutter out of the hydraulic power source.
2. Attach a blade between the blade axis and flange. Then tighten it by tightening torque of 20 to 30 N · m. At this time remove the screws attaching the holder by Allen (hexagon) wrench and insert a Phillips screw driver into the baffle hole to prevent the blade from rotating.

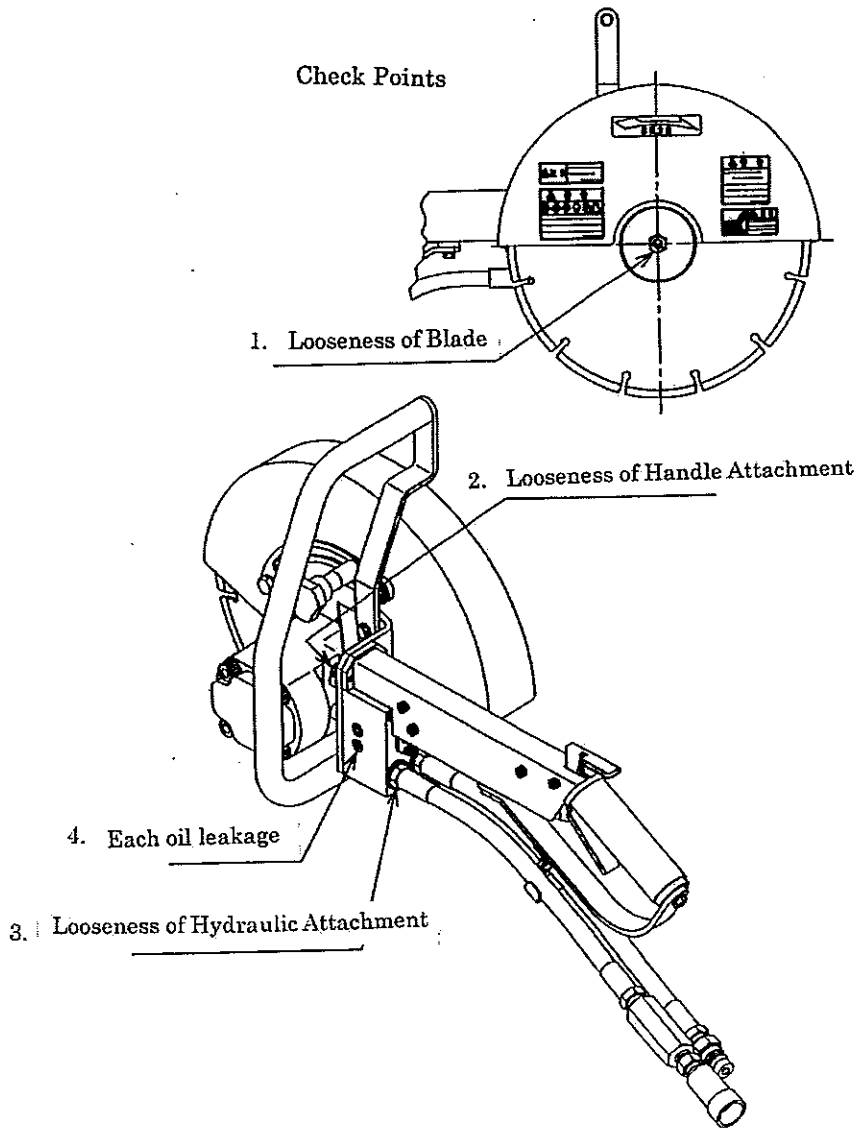


Checking Points before Operation

Check the following points before operation.

| Checking Points | Procedures |
|---|--|
| 1. Looseness of blade nuts | Tighten the nuts by the tightening torque of 20 to 30 N · m. |
| 2. Looseness of handle attachment parts | Tighten the bolts when the handle is rattled. |
| 3. Looseness of hose connecting parts | Tighten the connectors. |
| 4. Oil leakage | Repair the parts. |
| 5. Looseness of bolts | Tighten the bolts. |

Check Points



Precautions for Use

1. Be careful about the following points for use.
 - (1) Do not touch the rotating blade.
 - (2) Do not stumble over the hydraulic hoses.
 - (3) Do not fall down at unstable foothold.
 - (4) Use the hand cutter with working good posture so as not to have backache.
2. Ask the sales agent or us if you use the hand cutter with other power sources than a portable hydraulic power unit.
3. Use a diamond blade of less than 12 inch with its mounting hole diameter of 22mm. Never use any blades with different mounting diameters. Troubles may occur by breakage.
4. A little oil is leaked when you connect and disconnect the hydraulic hoses. Be careful so as not to make the work area dirty with dirt or mud accreted to the oil.
5. Fixate the blade cover for use.
6. Do not use the hand cutter without the blade cover.
7. Turn off the hydraulic power unit at once if the hydraulic hoses are cracked and oil is blown out while at work.
8. In case the hand cutter does not stop even though the control lever is released, stop the hydraulic power unit immediately. Check up and repair the hand cutter.
9. Connect the male and the female connectors after disconnecting the hand cutter and the hydraulic power unit.

Maintenance

I Daily

- (1) Check if there is any oil leakage or bleeding from the hoses or the body.
- (2) Check if the nuts of the blade are loose or not.

II Periodical

Check per 200 hours

Ask the sales agent of the periodic inspection.

| Checking Items | Checking Period |
|--|--------------------------|
| Replacement of the o-ring in the valve rod | Per 500 hours or 2 years |
| Replacement of each o-ring | Per 3 years |

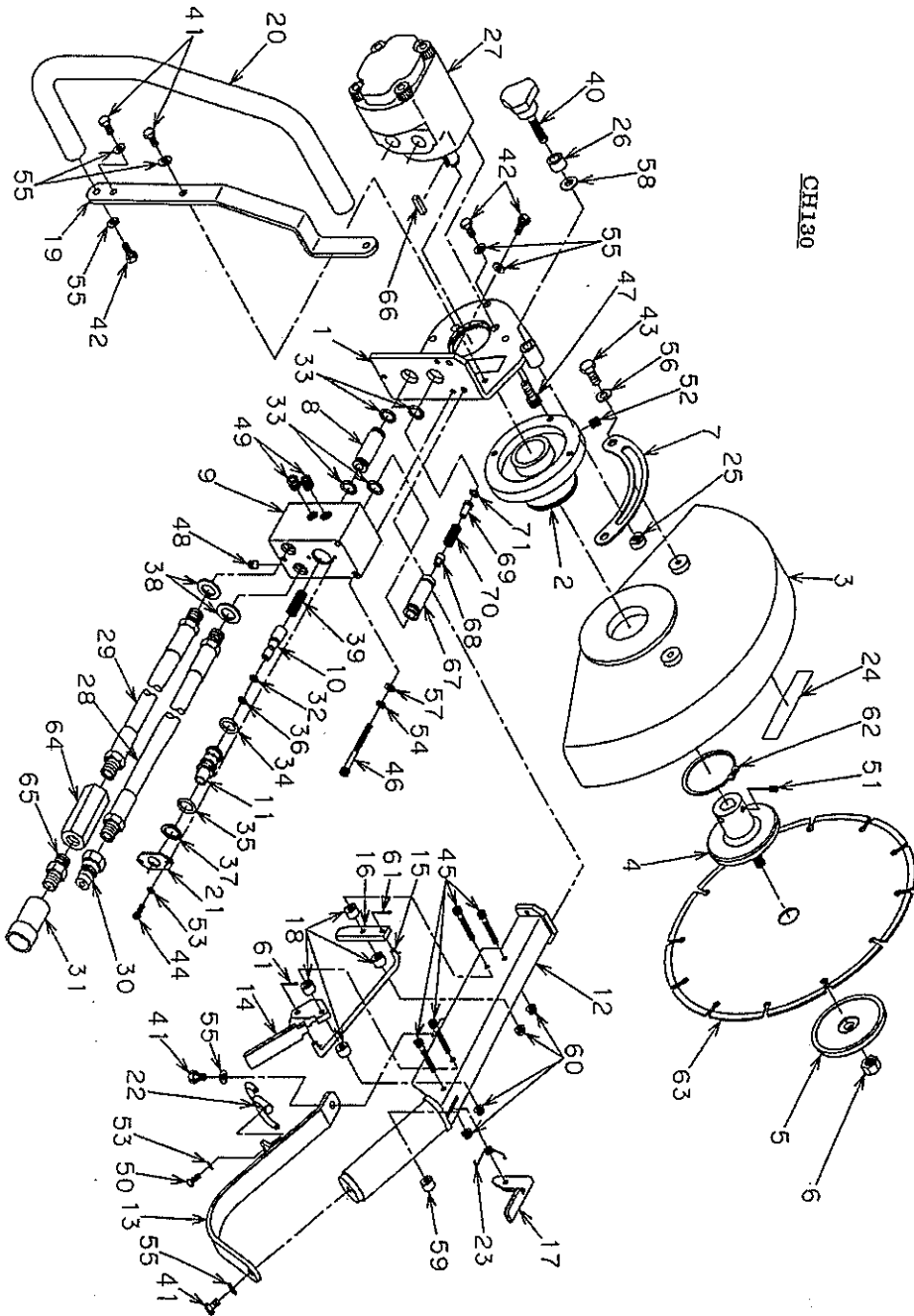
Trouble Shooting

* Ask the service agent.

| Symptom | Main cause | Countermeasure |
|---|--|--|
| Though the control lever is turned on, the blade does not rotate. | <ol style="list-style-type: none"> 1. The hoses are not connected. 2. The couplers are not connected normally. 3. The power unit stops. 4. The change valve of the power unit is not switched into "ON" position. 5. The motor is damaged. 6. "IN" and "OUT" are reversed. | <ol style="list-style-type: none"> 1. Connect the hoses properly. 2. Check each connector and tighten loosen connectors. 3. Start the power unit. 4. Switch the valve into "ON." 5. *Replace the motor. 6. Connect "IN" and "OUT" correctly. |
| The torque and the rotation frequency are low. | <ol style="list-style-type: none"> 1. The oil flow of the power unit is less. 2. The relief-valve pressure of the power unit is lower. 3. The hydraulic oil of the power unit is less. 4. The motor is worn out. | <ol style="list-style-type: none"> 1. *Inspect the rotational frequency and the hydraulic pump of the power unit. 2. *Adjust it from 11.7 to 17.2 MPa. 3. Fill the hydraulic oil. 4. *Replace the motor. |
| The blade tends to stop while it is rotating. | <ol style="list-style-type: none"> 1. The blade is not tightened firmly. 2. The relief-valve pressure of the power unit is lower. | <ol style="list-style-type: none"> 1. Retighten it by the adequate torque of 20 to 30N m. 2. Adjust it from 11.7 to 17.2MPa. |
| The rotation is excessively higher. | <ol style="list-style-type: none"> 1. The oil flow is too high. | <ol style="list-style-type: none"> 1. Adjust the flow rate from 20.5 to 25L/min. |

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| usually. | | |
| The blade stops abruptly. | <ol style="list-style-type: none"> 1. The couplers are come off. 2. The motor is damaged. | <ol style="list-style-type: none"> 1. Check if the couplers are connected properly or not. 2. *Replace the motor or repair it. |
| Though the control lever is released, the blade does not stop. | <ol style="list-style-type: none"> 1. Foreign bits pinch the valve rod. | <ol style="list-style-type: none"> 1. Disassemble and clean the section. Then face-up it. |
| Oil leakage from the valve rod | <ol style="list-style-type: none"> 1. O-ring is worn out or hardened or damaged. | <ol style="list-style-type: none"> 1. *Replace the o-ring. |
| Oil leakage from the motor | <ol style="list-style-type: none"> 1. The seal is worn out or damaged. | <ol style="list-style-type: none"> 1. *Replace the seal. |
| Oil leakage from the oil tube | <ol style="list-style-type: none"> 1. The o-ring is worn out. | <ol style="list-style-type: none"> 1. *Replace the o-ring. |

Exploded View



Parts List for CH130

| No. | Parts Number | Parts Name | Qty. |
|-----|--------------|-----------------|------|
| 1 | MC03Y001A | Motor Bracket | 1 |
| 2 | MC03Z002A | Holder | 1 |
| 3 | MC03Y003A | Blade Cover | 1 |
| 4 | MC03Z004A | Blade Axis | 1 |
| 5 | MC03Z005A | Blade Flange | 1 |
| 6 | MC03Z006A | Blade Nut | 1 |
| 7 | MC03Z007A | Clamp | 1 |
| 8 | MC03Z008A | Oil Tube | 1 |
| 9 | MC03Y009A | Manifold | 1 |
| 10 | MC03Z010A | Valve Rod | 1 |
| 11 | MC03Z011A | Valve Guide | 1 |
| 12 | MC03Y012A | Handle (A) | 1 |
| 13 | MC03Z013A | Guard | 1 |
| 14 | MC03Z014A | Control Lever | 1 |
| 15 | MC03Z015A | Link | 1 |
| 16 | MC03Z016A | Lever | 1 |
| 17 | MC03Z017A | Stopper | 1 |
| 18 | MC03Z018A | Collar | 4 |
| 19 | MC03Z019A | Handle Stay | 1 |
| 20 | MC03Z020A | Handle (B) | 1 |
| 21 | MC03Z021A | Plate | 1 |
| 22 | MC03Z022A | Hose Holder | 1 |
| 23 | MC03Z023A | Spring | 1 |
| 24 | MC03Z024A | Rotation Label | 1 |
| 25 | 1610-416-0 | Nut | 1 |
| 26 | 1610-436-0 | Collar | 1 |
| 27 | MA5R-101 | Hydraulic Motor | 1 |

| | | | |
|----|---------------------|-------------------------|----|
| 28 | 14091 3 - - 60 - - | Hydraulic Motor | 1 |
| 29 | 14091 3 - - 53 - - | Hydraulic Hose | 1 |
| 30 | QC-03M | Coupler (Male) | 1 |
| 31 | QC-03F | Coupler (Female) | 1 |
| 32 | OP-5 | O-ring | 1 |
| 33 | OP-11 | O-ring | 4 |
| 34 | OP-12.5 (1B) | O-ring (1 Class B) | 1 |
| 35 | OP-14 | O-ring | 1 |
| 36 | OBP-5 | Back-up Ring (Bias Cut) | 1 |
| 37 | OBP-14 | Back-up Ring (Bias Cut) | 1 |
| 38 | WS18 | Seal Washer | 2 |
| 39 | WM-10-30 | Spring | 1 |
| 40 | KB-0840 | Knob Bolt M8 x 40 | 1 |
| 41 | B-6 × 12 | Bolt | 4 |
| 42 | B-6 × 15 | Bolt | 7 |
| 43 | B-8 × 20 | Bolt | 2 |
| 44 | BH-4 × 12 | Bolt | 2 |
| 45 | BH-5 × 35 | Bolt | 4 |
| 46 | BH-8 × 60 | Bolt | 3 |
| 47 | BH-8 × 20 | Bolt | 2 |
| 48 | BPH-PT1/8 | Plug | 1 |
| 49 | BPH1-PT1/4 | Plug | 7 |
| 50 | SR-4 × 10 | Screw | 1 |
| 51 | SH-6 × 6(KUBOMISAK) | Screw | 2 |
| 52 | SH-8 × 10 | Screw | 1 |
| 53 | WS-4 | Washer | 3 |
| 54 | WS-5 | Washer | 3 |
| 55 | WS-6 | Washer | 11 |
| 56 | WS-8 | Washer | 2 |

| | | | |
|----|-------------------|----------------|----|
| 55 | WS-6 | Washer | 11 |
| 56 | WS-8 | Washer | 2 |
| 57 | WP-5 | Washer | 3 |
| 58 | WF-8 | Washer | 1 |
| 59 | MC03Z028A | Collor (B) | 1 |
| 60 | NFN-5 | Nut | 4 |
| 61 | PS-2.5 × 12 | Pin | 2 |
| 62 | CS-55 | Retaining Ring | 1 |
| 63 | DIAMOND BLADE 12" | Diamond Blade | 1 |
| 64 | ICV-03RC-05 | Check Valve | 1 |
| 65 | AJ-2083-06 | Adapter | 1 |
| 66 | C201-5 × 5 × 20 | Key | 1 |
| 67 | MC03Z025A | Oil Tube (B) | 2 |
| 68 | MC03Z026A | Plunger | 1 |
| 69 | MC03Z027A | Spring Holder | 1 |
| 70 | 5213 | Spring | 1 |
| 71 | CH-10 | Retaining Ring | 1 |