



HYDRAULIC COMPACTOR USER MANUAL



**WWW.DIESELEQUIP.COM
SYRACUSE, NEW YORK**

IMPORTANT

Thank you very much for purchasing DIESEL “**CP**” series Hydraulic Compactor.

Before any installation, operation, maintenance or repairing the Compactor, please read and understand all safety rules and warnings. If these warnings are ignored, special dangers may occur, causing injury or death to the operator or others.

Improper operation, maintenance or repairing of this machine will be dangerous, which may result in injury or death.

Before reading and understanding this Operating Manual, no operation, maintenance or repairing jobs are allowed to be done on this machine.

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CHAPTER 1 INSTRUCTIONS

1.1 Application

The unique design of DIESEL “**CP**” series Hydraulic Compactor can be applied to various quarries and construction sites.

1.2 Working Clothes

During operation, if you don't wear properly, it may cause injury. Loose clothing can easily get caught by the running machine. It is recommended that you wear suitable working clothes, for example, safety helmet, safety shoes, protective glasses, professional outerwear, ear protection, professional gloves, etc. Please do not wear a tie or scarf while working, or work with long hair.

1.3 Security

This manual is your guide for safe operation and maintenance of the machine. Before installing, operating or repairing the machine, please read this manual carefully and put the manual along with the machine.

1.4 Trial Operation

A non-skillfully operating of the machine may cause dangers. Please firstly testing run the machine in a spacious and clean place. Before using the machine, please ensure that you can operate it correctly in the future. During any operation or trial operation, please keep other people away the operation site.

1.5 Operation, Repair

Please operate within the machine's capacity. If exceeding capacity, the machine will be damaged and there will be dangerous accidents. Do not refit the machine, which will cause dangerous accidents. Do not operate the machine if any parts missing, and do not operate the machine under high temperature. Please be alert to the dangers caused by improper use, and do not repair the machine without authorization. When new parts need to be replaced, please contact us. If you have any questions about the product, please do not hesitate to let us know.

CHAPTER 2 MAIN SPECIFICATIONS

2.1 Compactor Model

| Model | Ramming Force (TON) | Frequency (VPM) | Oil Flow (GPM) | Oil Pressure (PSI) | Weight (LBS) | Suitable Excavator (TON) |
|-------------|------------------------|--------------------|-------------------|-----------------------|-----------------|-----------------------------|
| CP50&CP80 | 2 ~ 3 | 2,400 | 15.8~21.1 | 1280 ~ 1885 | 617 | 4 ~ 10 |
| CP120&CP160 | 5 ~ 6 | 2,000 | 21.1 ~ 29 | 1450 ~ 12030 | 1212 | 12 ~ 16 |
| CP200 | 7 ~ 8 | 2,000 | 29~36.9 | 1740 ~ 2320 | 1543 | 18 ~ 24 |
| CP300 | 9 ~ 10 | 2,000 | 34.3~42.2 | 1885 ~ 2465 | 2094 | 24 ~ 34 |

2.2 Motor Size

| Model | CP50 & CP80 | CP120 & CP160 | CP200 | CP300 |
|-------------------|-------------|---------------|-------|-------|
| Capacity (CC/REV) | 32 | 63 | 80 | 80 |
| Input Size | 1" | 1 1/4" | 2" | 2" |
| Output Size | 1" | 1 1/4" | 2" | 2" |
| Pressure | 7 | 7 | 7 | 7 |
| Oil Hose | 1/2" | 3/4" | 1" | 1" |

2.3 Oil Flow Control Valve

| Model | Rated Oil Flow (GPM) | Maximum Pressure (PSI) | Size |
|-------------|----------------------|------------------------|------|
| CP50&CP80 | 15 | 2320 | 1/2" |
| CP120&CP160 | 25 | 3045 | 3/4" |
| CP200 | 40 | 3045 | 3/4" |
| CP300 | 45 | 3045 | 3/4" |

CHAPTER 3 INSTALLATION

3.1 Connection

Please connect the inlet and outlet ends to the oil flow control valve.

| Compactor Model | Inlet Size | Outlet Size |
|-----------------|------------|-------------|
| CP50 & CP80 | 1/2" (PF) | 1/2" (PF) |
| CP120 & CP160 | 3/4" (PF) | 3/4" (PF) |
| CP200 | 1" (PF) | 1" (PF) |
| CP300 | 1" (PF) | 1" (PF) |

3.2 Adjustment

The compactor's oil flow control valve needs to be adjusted.

1. Remove the pipeline on the motor and replace it with an oil flow meter.
2. Adjust the oil flow control valve when oil going through the oil flow meter. Recommended oil flow is as below:

| Compactor Model | Set Value |
|-----------------|--------------------------------------|
| CP50 & CP80 | 15.85 ~ 21.13 GPM at 1305 ~ 1885 PSI |
| CP120 & CP160 | 21.13 ~ 29.06 GPM at 1450 ~ 2030 PSI |
| CP200 | 29.06 ~ 36.99 GPM at 1740 ~ 2320 PSI |
| CP300 | 34.35 ~ 42.27 GPM at 1885 ~ 2465 PSI |

3.3 Pressure of Oil Return Lines

Please check the oil pressure of oil return lines regularly. The maximum pressure is 145 PSI, and we recommend 29-101 PSI. Please keep low-pressure working, which will prolong the service life of the seal kit.

IMPORTANT

Please ensure that the above inspections have been done, and then you can start the excavator. Slowly extend the excavator arm to check if there is any squeeze in the pipeline. Please firstly choose small ramming force and open the oil flow.

CHAPTER 4 OPERATION

4.1 Please ensure that all pipelines are correctly installed and all oil-return lines are fully open.

4.2 Make sure that the oil pressure and flow rate are properly adjusted.

4.3 Start the compactor. Please place the compactor on the object to be rammed, and at the first 10-20 seconds, make sure to use a small pressure. You can adjust the pressure according to different objects.

4.4 During working, it is best to use small and large ramming forces alternately. Firstly use a small ramming force, and then large forces, and then small one. Repeat alternately. Please don't ram too much and exceed the capacity.

When ramming particulate object, it will be better if we raise the compactor to a height of 0.5-1 meter. For viscous object, height can be lower. Moisture is an important factor when ramming.

After daily work, please ensure no overloaded objects are in the base plate overnight.

CHAPTER 5 MAINTENANCE

5.1 Checking

Please check the Oil Pressure and Bearings after every 400 hours' operation.

5.2 Screw Torque

| Specifications | Torque |
|----------------|--------|
| 0.39 inch | 44 Nm |
| 0.47 inch | 77 Nm |
| 0.63 inch | 190 Nm |
| 0.79 inch | 350 Nm |

5.3 All Nuts

All hexagon nuts have a high strength rating of 12.9T (JIS) and are of lock-nut type for special purposes. After every 4 hours' use, please check again that all parts are not slack. Regular checking is an important way of ensuring the best machine performance.

IMPORTANT

When replace bearings, please choose original spare parts, because they're specially selected.

5.4 Lubricating Oil

The oil of the bearing must be kept at a moderate amount. The following is the amount of oil used in the compactor:

| Compactor Model | Oil Required |
|-----------------|--------------|
| CP50 & CP80 | 0.4 Gallon |
| CP120 & CP160 | 0.63 Gallon |
| CP200 | 1.29 Gallon |
| CP300 | 1.29 Gallon |

DIESEL

“CP” SERIES HYDRAULIC COMPACTORS

PART LIST

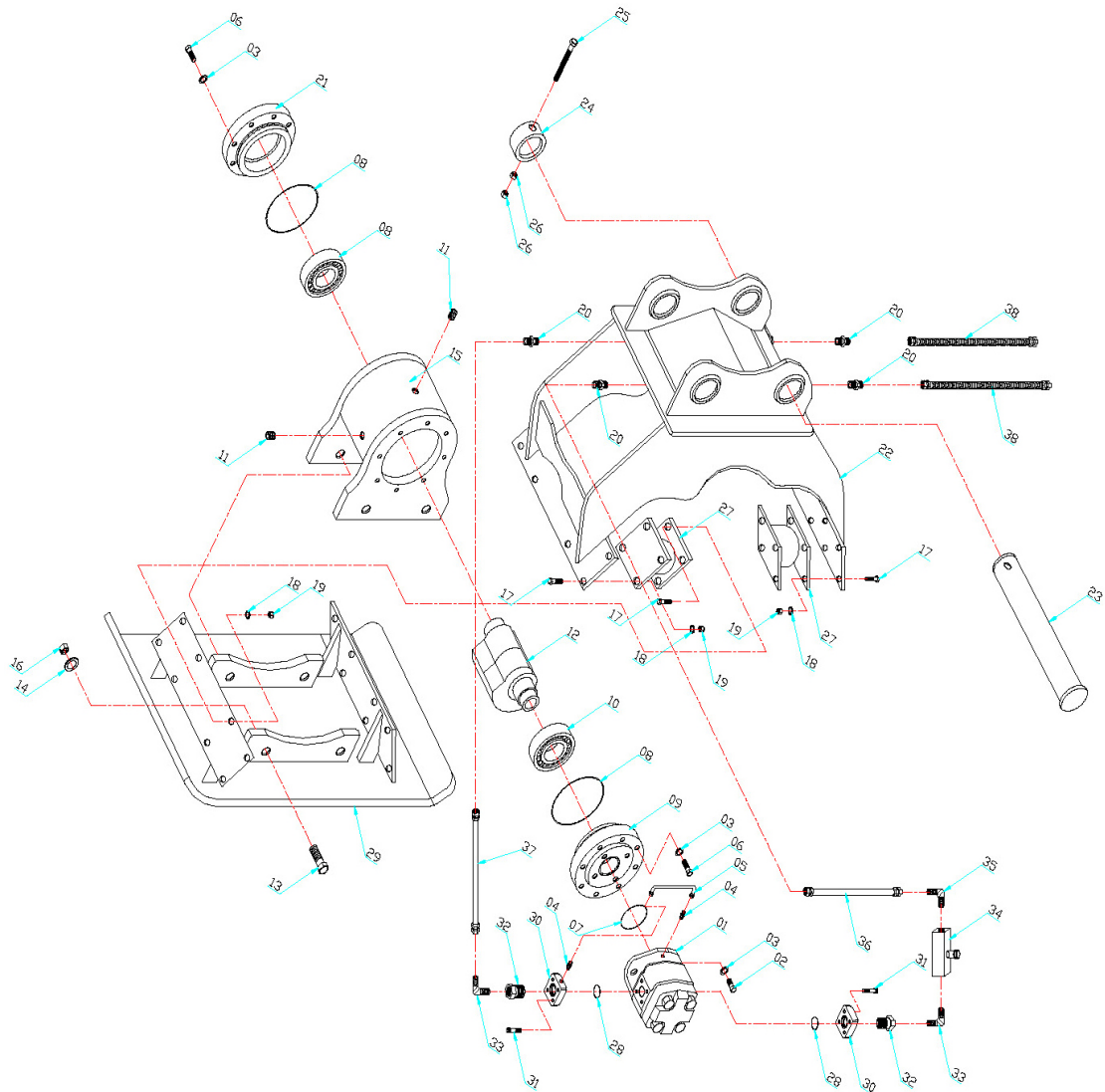
1. CP50 & CP80 Hydraulic Compactor ----- 9-10

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3. CP200 Hydraulic Compactor -----13-14

4. CP300 Hydraulic Compactor ----- 15-16

CP50 & CP80 Hydraulic Compactor

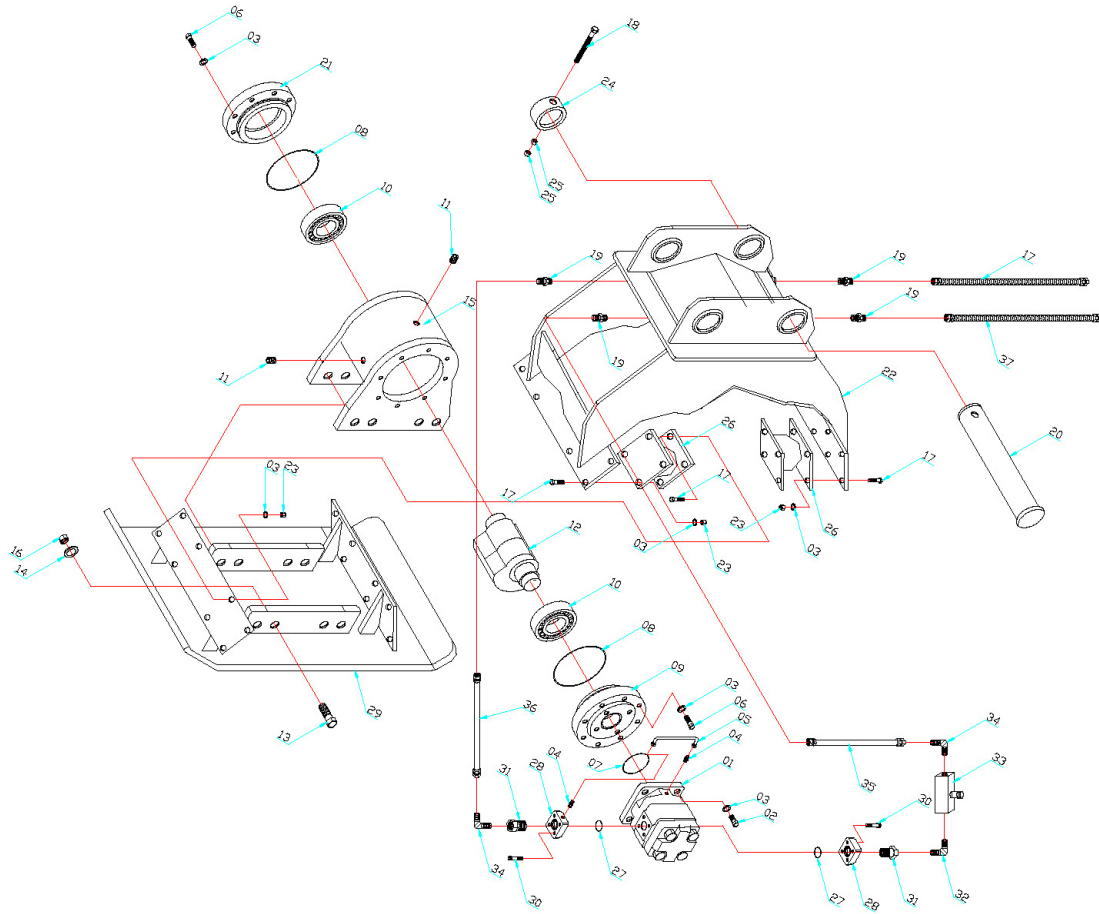


CP50 & CP80 Hydraulic Compactor Part List

| NO | PART NO. | PARTS NAME | QTY | REMARKS |
|----|----------|-----------------|-----|----------------------|
| 1 | CP-01 | MOTOR | 1 | 32CC |
| 2 | CP-02 | MOTOR BOLT | 4 | M12×30 |
| 3 | CP-03 | SPRING WASHER | 20 | M12 |
| 4 | CP-04 | NIPPLE | 2 | PT 1/4"×PF 1/4" |
| 5 | CP-05 | HOSE | 1 | 1/4"905×1/4"905×250L |
| 6 | CP-06 | BODY COVER BOLT | 16 | M12×40L |
| 7 | CP-07 | O-RING | 1 | AS 236 |

| | | | | |
|----|-------|----------------------|----|------------------|
| 8 | CP-08 | O-RING | 2 | 1B G155 |
| 9 | CP-09 | BODY COVER (A) | 1 | Ø220×52 |
| 10 | CP-10 | BEARING | 2 | NJ312 |
| 11 | CP-11 | SOCKET PLUG | 2 | PT 1/2" |
| 12 | CP-12 | CAM SHAFT ASS`Y | 1 | * |
| 13 | CP-13 | BODY BOLT | 4 | M24×70 |
| 14 | CP-14 | SPRING WASHER | 4 | M24 |
| 15 | CP-15 | BODY ASS`Y | 1 | * |
| 16 | CP-16 | NUT | 4 | M24 |
| 17 | CP-17 | RUBBER BOLT | 32 | M14×45L |
| 18 | CP-18 | SPRING WASHER | 32 | M14 |
| 19 | CP-19 | NYLON NET | 32 | M14 |
| 20 | CP-20 | NIPPLE | 4 | PT 1/2"×PF 1/2" |
| 21 | CP-21 | BODY COVER (B) | 1 | Ø220×47 |
| 22 | CP-22 | BRACKET ASS`Y | 1 | * |
| 23 | CP-23 | BRACKET PIN | * | * |
| 24 | CP-24 | BRACKET PIN STOP PIN | 2 | * |
| 25 | CP-25 | BRACKET PIN BOLT | 2 | M12×100L |
| 26 | CP-26 | BRACKET PIN NUT | 4 | M12 |
| 27 | CP-27 | RUBBER | 4 | 150×150×79 |
| 28 | CP-28 | O-RING | 2 | 1B P32 |
| 29 | CP-29 | BASE PLATE ASS`Y | 1 | * |
| 30 | CP-30 | IN OUT FLANGE | 2 | 73×59×28 |
| 31 | CP-31 | IN OUT FLANGE BOLT | 8 | M8×45L |
| 32 | CP-32 | SOCKET | 2 | PT 1"× PT 1/2" |
| 33 | CP-33 | NIPPLE | 1 | PT 1/2"× PT 1/2" |
| 34 | CP-34 | CONTROL VALVE | 1 | 1/2" |
| 35 | CP-35 | NIPPLE | 2 | PT 1/2"× PF 1/2" |
| 36 | CP-36 | HOSE | 1 | 1/2"×500L |
| 37 | CP-37 | HOSE | 1 | 1/2"×450L |
| 38 | CP-38 | HOSE | 2 | 1/2"×1500L |

CP120 & CP160 Hydraulic Compactor

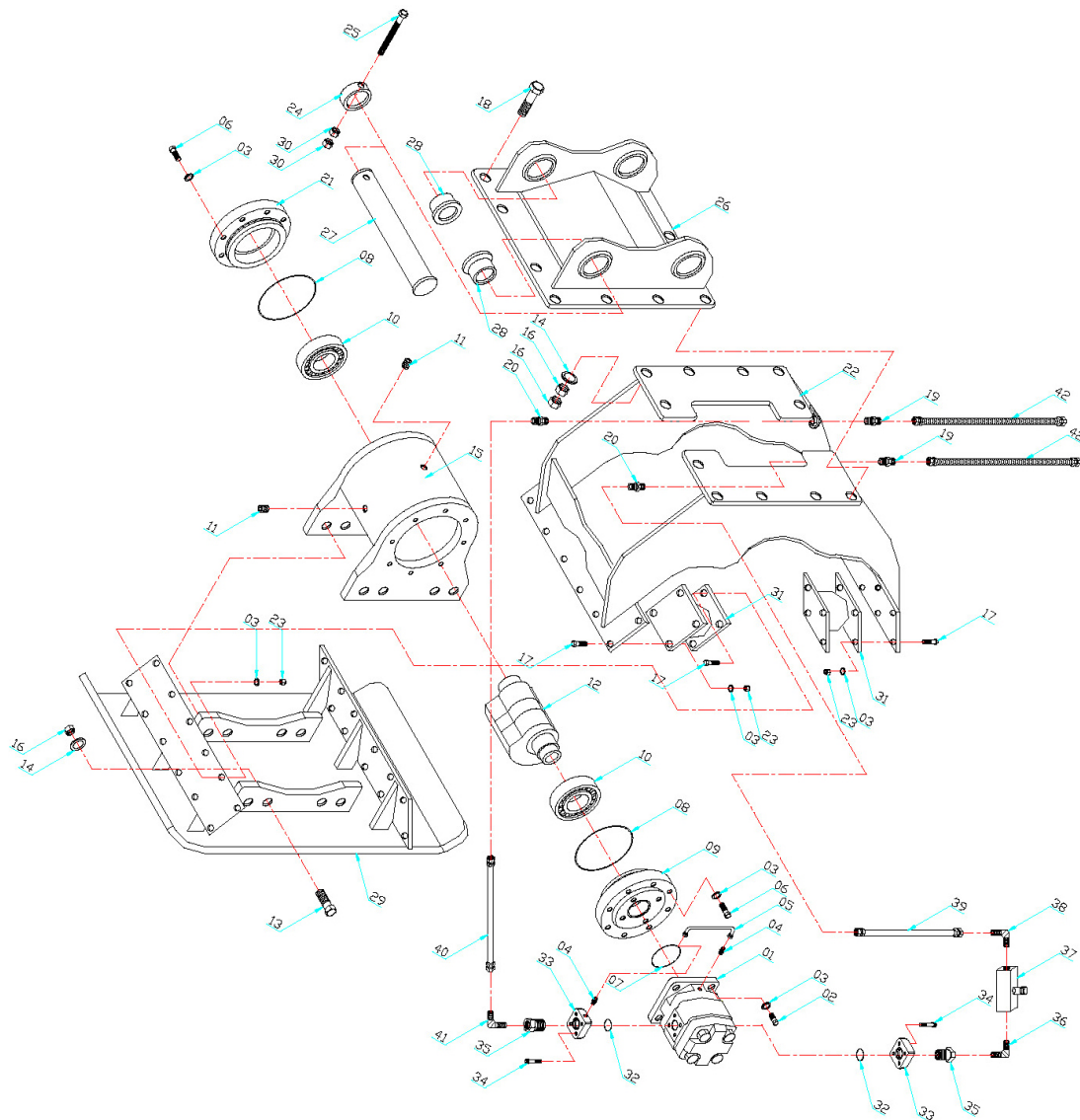


CP120 & CP160 Hydraulic Compactor Part List

| NO | PART NO. | PARTS NAME | QTY | REMARKS |
|----|----------|-----------------|-----|----------------------|
| 1 | CP-01 | MOTOR | 1 | 63CC |
| 2 | CP-02 | MOTOR BOLT | 4 | M14x35 |
| 3 | CP-03 | SPRING WASHER | 52 | M14 |
| 4 | CP-04 | NIPPLE | 2 | PT 1/4"×PF 1/4" |
| 5 | CP-05 | HOSE | 1 | 1/4"905×1/4"905×300L |
| 6 | CP-06 | BODY COVER BOLT | 16 | M14×65L |
| 7 | CP-07 | O-RING | 1 | AS 250 |
| 8 | CP-08 | O-RING | 2 | 1B G220 |
| 9 | CP-09 | BODY COVER (A) | 1 | Ø290×75 |

| | | | | |
|----|-------|----------------------|----|--------------------|
| 10 | CP-10 | BEARING | 2 | NJ318 |
| 11 | CP-11 | SOCKET PLUG | 2 | PT 1/2" |
| 12 | CP-12 | CAM SHAFT ASS`Y | 1 | * |
| 13 | CP-13 | BODY BOLT | 8 | M24×75 |
| 14 | CP-14 | SPRING WASHER | 8 | M24 |
| 15 | CP-15 | BODY ASS`Y | 1 | * |
| 16 | CP-16 | NUT | 8 | M24 |
| 17 | CP-17 | RUBBER BOLT | 32 | M14×50L |
| 18 | CP-18 | BRACKET PIN BOLT | 2 | M16×160L |
| 19 | CP-19 | NIPPLE | 4 | PT 3/4"×PF 4/3" |
| 20 | CP-20 | BRACKET PIN | 2 | * |
| 21 | CP-21 | BODY COVER (B) | 1 | Ø290×65 |
| 22 | CP-22 | BRACKET ASS`Y | 1 | * |
| 23 | CP-23 | NYLON NUT | 32 | M14 |
| 24 | CP-24 | BRACKET PIN STOP PIN | 2 | * |
| 25 | CP-25 | BRACKET PIN NUT | 4 | M16 |
| 26 | CP-26 | RUBBER | 4 | 180×180×100 |
| 27 | CP-27 | O-RING | 2 | 1B G36 |
| 28 | CP-28 | IN OUT FLANGE | 2 | 83×64×29 |
| 29 | CP-29 | BASE PLATE ASS`Y | 1 | * |
| 30 | CP-30 | IN OUT FLANGE BOLT | 8 | M10×45L |
| 31 | CP-31 | SOCKET | 2 | PT 1 1/4"× PT 3/4" |
| 32 | CP-32 | NIPPLE | 1 | PT 3/4"× PT 3/4" |
| 33 | CP-33 | CONTROL VALVE | 1 | 3/4" |
| 34 | CP-34 | NIPPLE | 2 | PT 3/4"× PF 3/4" |
| 35 | CP-35 | HOSE | 1 | 3/4"×700L |
| 36 | CP-36 | HOSE | 1 | 3/4"×600L |
| 37 | CP-37 | HOSE | 2 | 3/4"×2000L |

CP200 Hydraulic Compactor

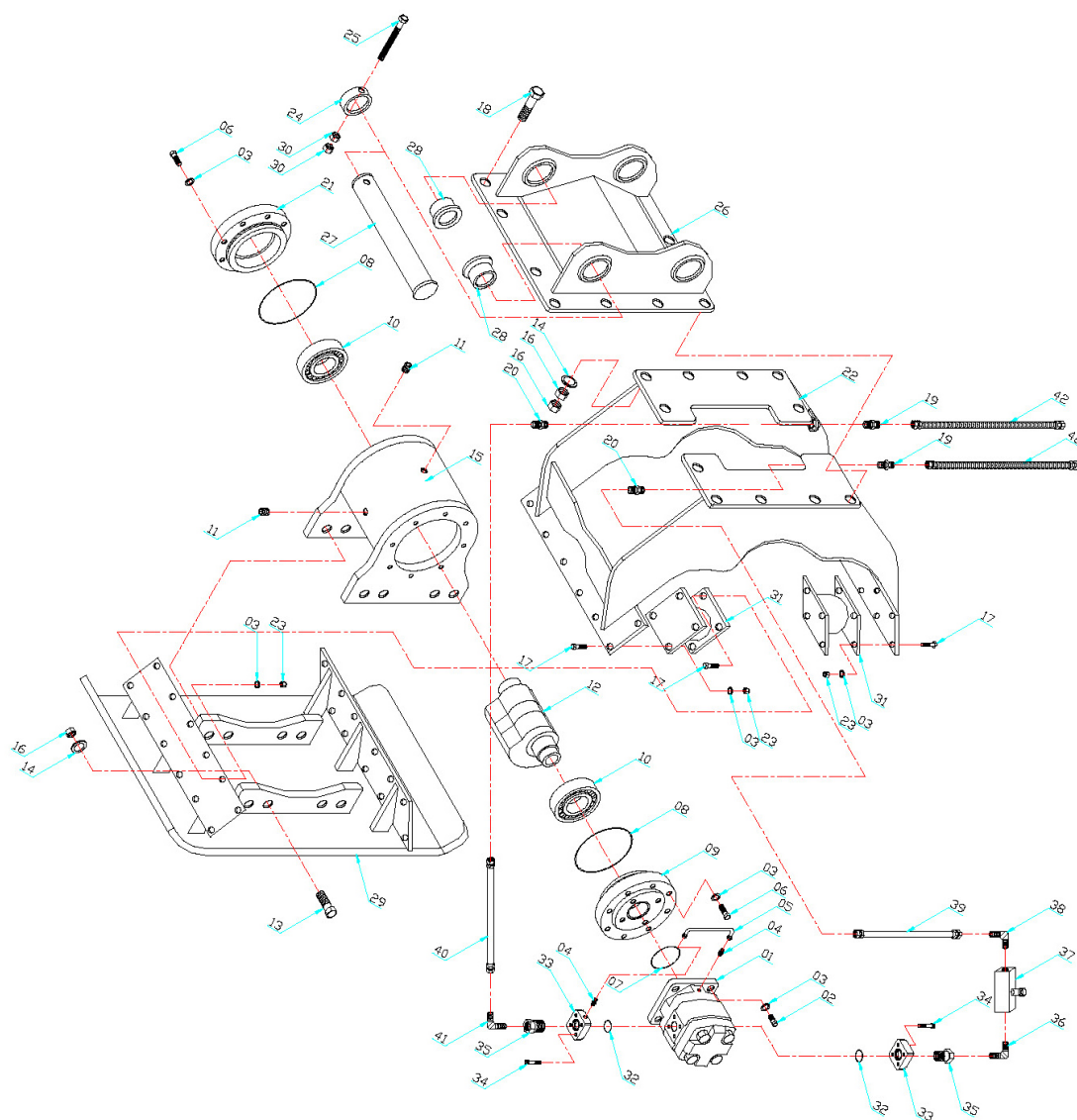


CP200 Hydraulic Compactor Part List

| NO | PART NO. | PARTS NAME | QTY | REMARKS |
|----|----------|-----------------|-----|----------------------|
| 1 | CP-01 | MOTOR | 1 | 80CC |
| 2 | CP-02 | MOTOR BOLT | 4 | M14x35 |
| 3 | CP-03 | SPRING WASHER | 68 | M14 |
| 4 | CP-04 | NIPPLE | 2 | PT 1/4"×PF 1/4" |
| 5 | CP-05 | HOSE | 1 | 1/4"905×1/4"905×300L |
| 6 | CP-06 | BODY COVER BOLT | 16 | M14×65L |
| 7 | CP-07 | O-RING | 1 | AS 250 |

| | | | | |
|----|-------|----------------------|----|-----------------|
| 8 | CP-08 | O-RING | 2 | 1B G220 |
| 9 | CP-09 | BODY COVER (A) | 1 | Ø290×75 |
| 10 | CP-10 | BEARING | 2 | NJ318 |
| 11 | CP-11 | SOCKET PLUG | 2 | PT 1/2" |
| 12 | CP-12 | CAM SHAFT ASS`Y | 1 | * |
| 13 | CP-13 | BODY BOLT | 8 | M24×75 |
| 14 | CP-14 | SPRING WASHER | 20 | M24 |
| 15 | CP-15 | BODY ASS`Y | 1 | * |
| 16 | CP-16 | NUT | 32 | M24 |
| 17 | CP-17 | RUBBER BOLT | 48 | M14×50L |
| 18 | CP-18 | TOP BRACKET BOLT | 12 | M24×90L |
| 19 | CP-19 | NIPPLE | 2 | PT 1"×PF 1" |
| 20 | CP-20 | NIPPLE | 2 | PT 1"×PF 3/4" |
| 21 | CP-21 | BODY COVER (B) | 1 | Ø290×65 |
| 22 | CP-22 | BRACKET ASS`Y | 1 | * |
| 23 | CP-23 | NYLON NUT | 48 | M14 |
| 24 | CP-24 | BRACKET PIN STOP PIN | 2 | * |
| 25 | CP-25 | BRACKET PIN BOLT | 2 | M16×180L |
| 26 | CP-26 | TOP BRACKET ASS`Y | 1 | * |
| 27 | CP-27 | BRACKET PIN | 2 | * |
| 28 | CP-28 | T-BUSH | 4 | * |
| 29 | CP-29 | BASE PLATE ASS`Y | 1 | * |
| 30 | CP-30 | BRACKET PIN NUT | 4 | M16 |
| 31 | CP-31 | RUBBER | 6 | 180×180×100 |
| 32 | CP-32 | O-RING | 2 | 1B G50 |
| 33 | CP-33 | IN OUT FLANGE | 2 | 97×83×38 |
| 34 | CP-34 | IN OUT FLANGE BOLT | 8 | M12×60L |
| 35 | CP-35 | SOCKET | 2 | PT 2"× 1" |
| 36 | CP-36 | NIPPLE | 1 | PT 1"× PT 3/4" |
| 37 | CP-37 | CONTROL VALVE | 1 | 3/4" |
| 38 | CP-38 | NIPPLE | 1 | PT 3/4"×PF 3/4" |
| 39 | CP-39 | HOSE | 1 | 3/4"×800L |
| 40 | CP-40 | HOSE | 1 | 3/4"×700L |
| 41 | CP-41 | NIPPLE | 1 | PT 1"×PF 3/4" |
| 42 | CP-42 | HOSE | 2 | 1"×2400L |

CP300 Hydraulic Compactor



CP300 Hydraulic Compactor Part List

| NO | PART NO. | PARTS NAME | QTY | REMARKS |
|----|----------|-----------------|-----|----------------------|
| 1 | CP-01 | MOTOR | 1 | 80CC |
| 2 | CP-02 | MOTOR BOLT | 4 | M14x35 |
| 3 | CP-03 | SPRING WASHER | 68 | M14 |
| 4 | CP-04 | NIPPLE | 2 | PT 1/4"×PF 1/4" |
| 5 | CP-05 | HOSE | 1 | 1/4"905×1/4"905×300L |
| 6 | CP-06 | BODY COVER BOLT | 16 | M14×65L |
| 7 | CP-07 | O-RING | 1 | AS 250 |

| | | | | |
|----|-------|----------------------|----|-----------------|
| 8 | CP-08 | O-RING | 2 | 1B G220 |
| 9 | CP-09 | BODY COVER (A) | 1 | Ø290×75 |
| 10 | CP-10 | BEARING | 2 | NJ318 |
| 11 | CP-11 | SOCKET PLUG | 2 | PT 1/2" |
| 12 | CP-12 | CAM SHAFT ASS`Y | 1 | * |
| 13 | CP-13 | BODY BOLT | 8 | M24×75 |
| 14 | CP-14 | SPRING WASHER | 20 | M24 |
| 15 | CP-15 | BODY ASS`Y | 1 | * |
| 16 | CP-16 | NUT | 32 | M24 |
| 17 | CP-17 | RUBBER BOLT | 48 | M14×50L |
| 18 | CP-18 | TOP BRACKET BOLT | 12 | M24×90L |
| 19 | CP-19 | NIPPLE | 2 | PT 1"×PF 1" |
| 20 | CP-20 | NIPPLE | 2 | PT 1"×PF 3/4" |
| 21 | CP-21 | BODY COVER (B) | 1 | Ø290×65 |
| 22 | CP-22 | BRACKET ASS`Y | 1 | * |
| 23 | CP-23 | NYLON NUT | 48 | M14 |
| 24 | CP-24 | BRACKET PIN STOP PIN | 2 | * |
| 25 | CP-25 | BRACKET PIN BOLT | 2 | M16×180L |
| 26 | CP-26 | TOP BRACKET ASS`Y | 1 | * |
| 27 | CP-27 | BRACKET PIN | 2 | * |
| 28 | CP-28 | T-BUSH | 4 | * |
| 29 | CP-29 | BASE PLATE ASS`Y | 1 | * |
| 30 | CP-30 | BRACKET PIN NUT | 4 | M16 |
| 31 | CP-31 | RUBBER | 6 | 180×180×100 |
| 32 | CP-32 | O-RING | 2 | 1B G50 |
| 33 | CP-33 | IN OUT FLANGE | 2 | 97×83×38 |
| 34 | CP-34 | IN OUT FLANGE BOLT | 8 | M12×60L |
| 35 | CP-35 | SOCKET | 2 | PT 2"× 1" |
| 36 | CP-36 | NIPPLE | 1 | PT 1"× PT 3/4" |
| 37 | CP-37 | CONTROL VALVE | 1 | 3/4" |
| 38 | CP-38 | NIPPLE | 1 | PT 3/4"×PF 3/4" |
| 39 | CP-39 | HOSE | 1 | 3/4"×800L |
| 40 | CP-40 | HOSE | 1 | 3/4"×700L |
| 41 | CP-41 | NIPPLE | 1 | PT 1"×PF 3/4" |
| 42 | CP-42 | HOSE | 2 | 1"×2400L |

DIESEL EQUIPMENT

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