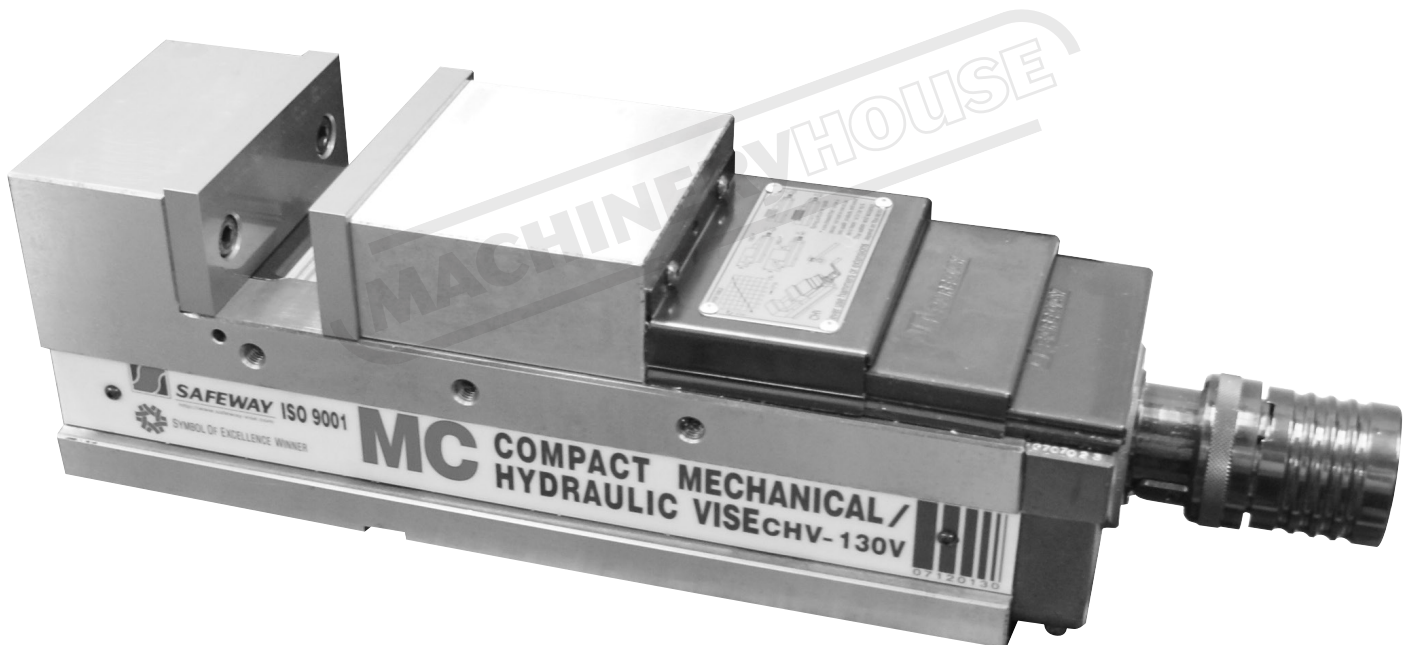


# INSTRUCTION MANUAL

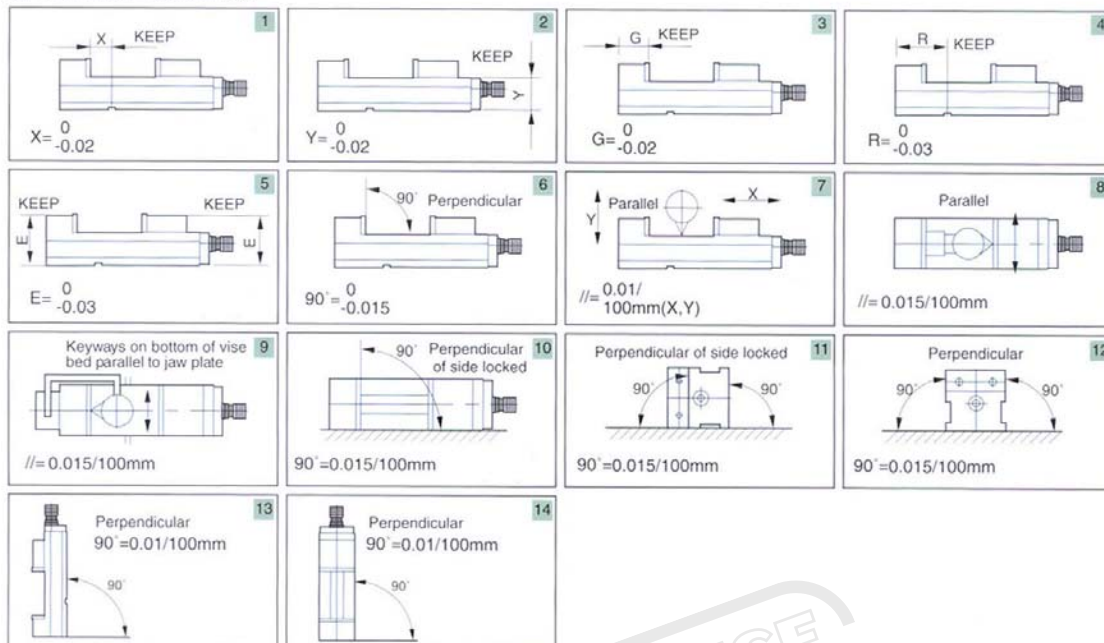
## CHV-130V Compact Hydraulic Vice 130mm



V321

## Tolerances

### CLEARANCE CONTROL



Specifications are based on the “V” series only.

WISE MAX.OPENING

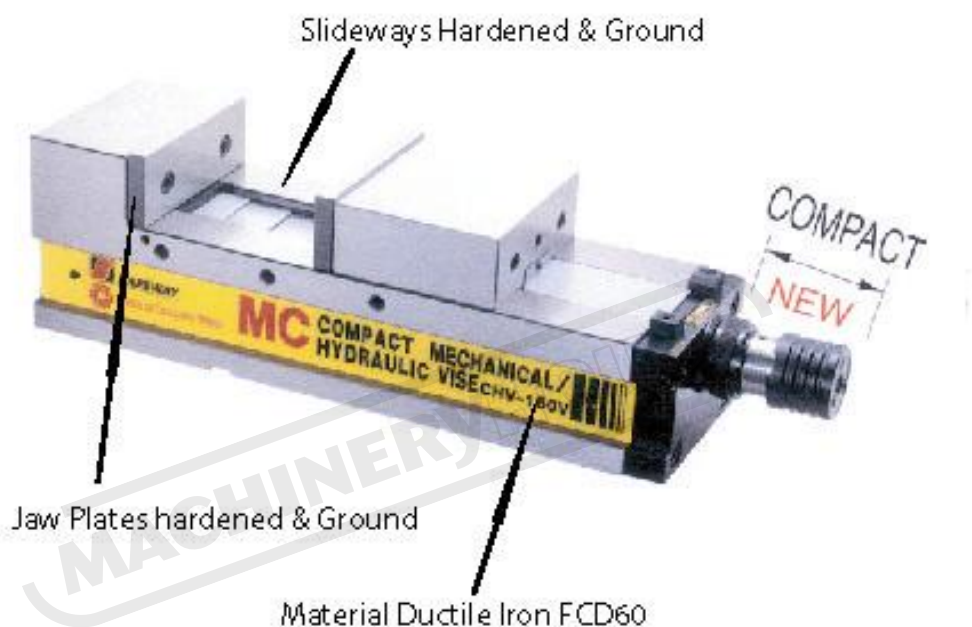


WISE SIDE-LOCK



### BEFORE OPERATION CHECK THE FOLLOWING

1. Check the accuracy sheet and attachment
2. Remove the protective layers of grease and rust preventive before moving the slides.
3. Lubricate all slide ways and lubrication points
4. Attaché the keys to the bottom of the vice for tee slot location. To insure accuracy with the axis of the machine check that the tee slot has been ground.
5. Insure that the vice is balanced before lifting



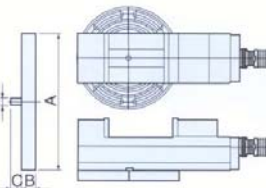
### FEATURES

1. Mechanical/Hydraulic spindle
2. Down thrust "Semi-sphere Segment" mechanism eliminates jaw lift and work tilting
3. All surfaces ground
4. Rigid vice body manufactured from ductile iron FCD 60JIS (equal to GGG60) with 60kgs/mm or 80888 psi tensile strength
5. Vice bedflame hardened to HRC 45 to minimise wear and maintain accuracy

## MC COMPACT MECHANICAL / HYDRAULIC VISE

### SWIVEL BASE (STEEL)

MODEL ● SBD-100 ● SBD-130  
● SBD-160 ● SBD-200



| SBD | A   | B  | C  | D  | N.W. |
|-----|-----|----|----|----|------|
| 100 | 248 | 27 | 25 | 16 |      |
| 130 | 296 | 30 | 25 | 18 |      |
| 160 | 312 | 34 | 25 | 18 |      |
| 200 | 378 | 44 | 25 | 18 |      |

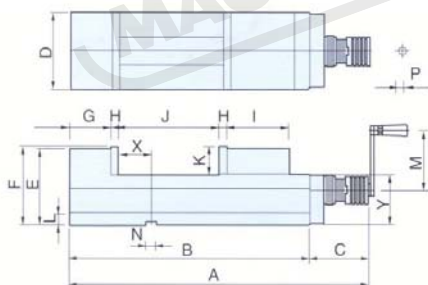
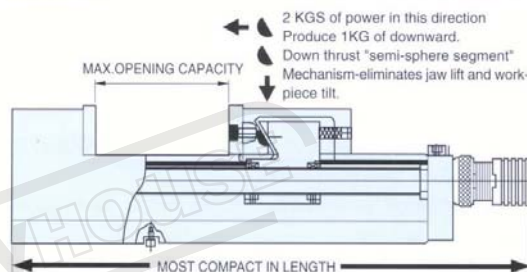
THE WHOLE SWIVEL BASE BY MADE OF STEEL BY HARDNESS AND TAKE UP WEAR AND MAINTAIN ACCURACY FOR LONG

#### STANDARD ACCESSORIES

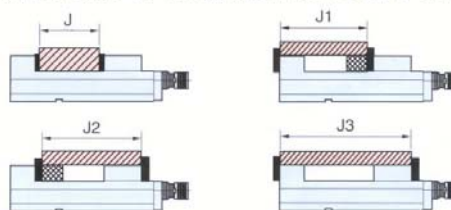
- 1.Handle X 1 pc
- 2.Guide key X 2pcs  
M6 X 10L X 2pcs
- 3.Chip cover X 1 set
- 4.Vise locked block X 4 pcs

#### OPTIONAL ACCESSORIES

- 1.Special Application  
Jaw Plates (P.35.36)
- 2.Work-piece Stopper
- 3.Swivel Base - SBD (Steel)
- 4.Swivel Base-SB (Cast Iron)



#### THE 4 WAYS OF CLAMPING FOR YOUR BEST CHOICE



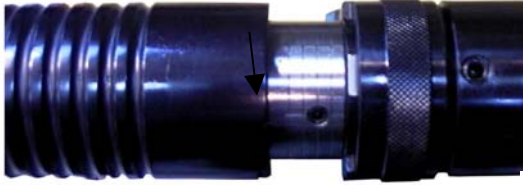
Unit:mm

| ORDER NO. | MODEL    | A   | B   | C   | D   | E   | F   | G  | H  | I   | J     | J1      | J2      | J3      |
|-----------|----------|-----|-----|-----|-----|-----|-----|----|----|-----|-------|---------|---------|---------|
| 07120100  | CHV-100V | 470 | 340 | 130 | 101 | 130 | 133 | 65 | 15 | 105 | 0-125 | 125-190 | 125-230 | 125-320 |
| 07120130  | CHV-130V | 535 | 405 | 130 | 131 | 147 | 150 | 70 | 15 | 115 | 0-180 | 180-240 | 180-290 | 180-380 |
| 07120160  | CHV-160V | 625 | 495 | 130 | 161 | 160 | 163 | 85 | 15 | 130 | 0-240 | 240-320 | 240-360 | 240-470 |
| 07120200  | CHV-200V | 700 | 570 | 130 | 201 | 170 | 173 | 90 | 18 | 150 | 0-280 | 280-360 | 280-420 | 280-540 |

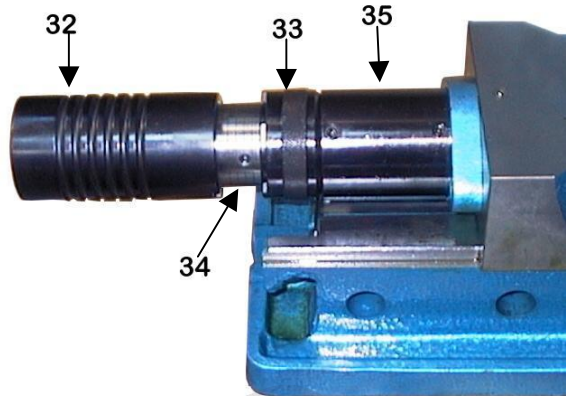
| ORDER NO. | MODEL    | K  | L  | M   | N  | P  | X  | X=0.02 | Y   | Y=0.02 | MAX.PRESSURE | LIMIT.PRESSURE | N.W. | G.W. | SHIPMENT SIZE |
|-----------|----------|----|----|-----|----|----|----|--------|-----|--------|--------------|----------------|------|------|---------------|
| 07120100  | CHV-100V | 48 | 22 | 125 | 16 | 14 | 45 | Yes    | 85  | Yes    | 3500kgf      | 4000kgf        | 27kg | 34kg | 680x170x230   |
| 07120130  | CHV-130V | 55 | 22 | 125 | 18 | 14 | 65 | Yes    | 95  | Yes    | 4500kgf      | 5000kgf        | 40kg | 48kg | 780x200x240   |
| 07120160  | CHV-160V | 58 | 22 | 125 | 18 | 14 | 65 | Yes    | 105 | Yes    | 5500kgf      | 6500kgf        | 58kg | 65kg | 800x240x260   |
| 07120200  | CHV-200V | 63 | 22 | 125 | 18 | 14 | 82 | Yes    | 110 | Yes    | 7000kgf      | 8000kgf        | 87kg | 99kg | 860x280x270   |

## OPERATING INSTRUCTIONS

### 1. CLAMPING WITH HYDRAULIC POWER



- a. Insure that the four lines on the hydraulic spindle 34 are visible. To bring them into full view hold the cylinder 35 body and turn the spindle 32 counter clockwise.



- b. Slide the collar 33 to the non en-gauge position.

- c. Turn the handle clockwise to bring the movable jaw into the work piece



- d. The vice will lock up as a mechanical vice. When the handle starts to tighten bump the handle sharply clock wise with your hand and the hydraulic mechanism will commence. The spindle 34 will remain stationary and the outer handle

will turn.

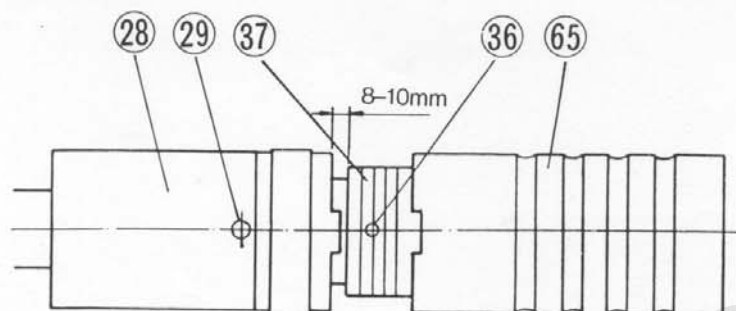
- e. The lines engraved on spindle 34 can be used as a guide to indicate the amount of pressure applied to the job. Maximum pressure is obtained when all the lines have been covered.



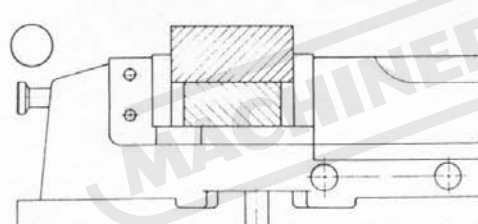
- f. To undo the vice wind the handle anti clock wise. The outer spindle 32 will rotate with 34 remaining stationary until the hydraulic system has reached its home position the spindle 34 will rotate to undo the mechanical side of the system.

### HOW TO PUT OIL INTO BOSTER AS FOLLOWING: (PAT. 45716)

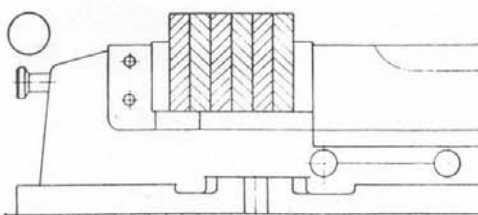
1. Hold the cylinder 28, knock handle clockwise until the clutch 38 39 non-engagement.
2. Loosen oil hole plug 29, and continue turn handle clockwise, until the air from boster by pressed.
3. Drop oil (R-68) into the boster hole, simultaneous turn handle counter clockwise. Untile the boster oil full. (Maybe twice)
4. Tightly the boster plug 29 and try clamping.
5. Loosen set screw 35 and boster plug 29 again.
6. Hold the cylinder 28, use handle turn collar 65 counter clockwise simultaneous drop oil into boster again. Until the cylinder 37 loosen 8-10mm, then tightly boster plug 29 and turn collar 65 clockwise tightly set screw 35. You can finished pre-pressure.
7. Check clamping force whether OK!



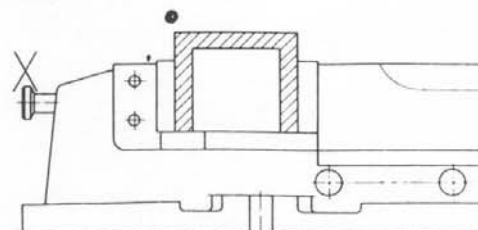
### HOW TO CORRECT CLAMPING YOUR WORKPIECE



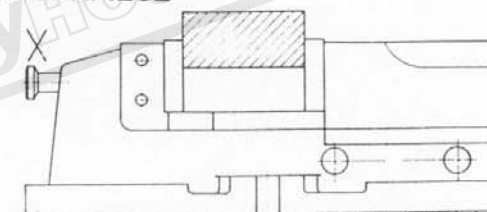
Correct



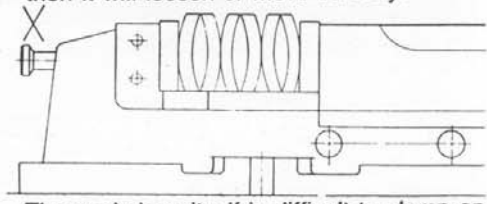
Correct



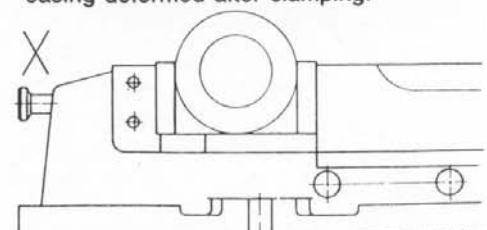
The workpiece itself will become bendable after clamping.



The bottom of workpiece is suspensible and it is not easy to take the resistance of cutting, then it will loosen or move secretly.



The workpiece itself is difficult to clamp and easing deformed after clamping.



Use CJ-Jaw plates



## SAFEWAY MACHINERY INDUSTRY CORPORATION

## PART LISTS

MODEL:CHV-100V

DATE:8 JULY. 1998

MECH./HYDR. MC COMPACT VISE.

Computer No.07120100

| NO. | Computer No. | Part No.     | Part Name          | Q'ty | Specification | Remark |
|-----|--------------|--------------|--------------------|------|---------------|--------|
| 1   | 07120100-001 | CHV-100-001  | MAIN BODY          | 1    |               |        |
| 2   | 07120100-002 | CHV-100-002  | MAIN SCREW SUPPORT | 1    |               |        |
| 3   | 07120100-003 | CHV-100-003  | MOVABLE            | 1    |               |        |
| 4   | 07120100-004 | CHV-100-004  | JAW PLATES         | 2    |               |        |
| 5   | 07120100-005 | CHV-100-005  | LOCK DOWN BODY     | 1    |               |        |
| 6   | 07120160-006 | CHV-160-006  | SEAL COVER         | 1    |               |        |
| 7   | 07120100-007 | CHV-100-007  | MAIN SCREW         | 1    |               |        |
| 8   | 07800160-029 | PHV-160-029  | KEY                | 1    | 12X25X5       |        |
| 9   | 07120160-008 | CHV-160-008  | COLLAR             | 1    |               |        |
| 10  | OS352007     | OS352007     | CHIP SEAL          | 1    | 35X20X7       |        |
| 11  | 07120160-009 | CHV-160-009  | PISTON             | 1    |               |        |
| 12  | 07120160-010 | CHV-160-010  | CYLINDER BODY      | 1    |               |        |
| 13  | 07120160-011 | CHV-160-011  | SLEEVE             | 1    |               |        |
| 14  | 07120160-012 | CHV-160-012  | POWER PUSH ROD     | 1    |               |        |
| 15  | 07800160-034 | PHV-160-034  | CLUTCH([H])        | 1    |               |        |
| 16  | 07800160-033 | PHV-160-033  | CLUTCH([H])        | 1    |               |        |
| 17  | 07800160-035 | PHV-160-035  | MINOR SCREW ROD    | 1    |               |        |
| 18  | R04X4        | RO4X4        | ROLLER             | 4    | 4X4M/M        |        |
| 19  | 07800160-037 | PHV-160-037  | CLUTCH SPRING      | 1    |               |        |
| 20  | 07800160-036 | PHV-160-036  | CLUTCH WASHER      | 1    |               |        |
| 21  | SR-S-14      | SR-S-14      | SNAP RING          | 1    | S-14          |        |
| 22  | SB03         | SB03         | STEEL BALL         | 1    | 3M/M          |        |
| 23  | SSM06X08L    | SSM06X08L    | SET SCREW          | 1    | M6X8L         |        |
| 24  | SSM06X08L    | SSM06X08L    | SET SCREW          | 2    | M6X8L         |        |
| 25  | SB04         | SB04         | STEEL BALL         | 26   | 4M/M          |        |
| 26  | 07800160-027 | PHV-160-027  | BACKUP RING        | 1    |               |        |
| 27  | OS201006     | OS201006     | OIL-SEAL           | 1    | 20X10X06      |        |
| 28  | 07800160-021 | PHV-160-021  | PACKING RING       | 1    |               |        |
| 29  | 07800160-026 | PHV-160-026  | BOSTER RING        | 1    |               |        |
| 30  | OS352508     | OS352508     | OIL-SEAL           | 1    |               |        |
| 31  | OR-P-28      | OR-P-28      | O-RING             | 1    | P-28          |        |
| 32  | SSM06X10L    | SSM06X10L    | SET SCREW          | 1    | M6X10L        |        |
| 33  | DS204015     | DS204015     | DISC SPRING        | 1    | 20X40X1.5     |        |
| 34  | 07120160-013 | 07120160-013 | KEY                | 1    |               |        |
| 35  | SSM06X08L    | SSM06X08L    | SET SCREW          | 1    | M6X8L         |        |
| 36  | 07800160-024 | PHV-160-024  | OIL PLUG           | 1    |               |        |
| 37  | OR-P-10      | OR-P-10      | O-RING             | 2    | P-10          |        |
| 38  | 07800160-025 | PHV-160-025  | OIL PLUG SEAL      | 1    |               |        |
| 39  | WS212        | WS212        | SNAP RING          | 1    |               |        |
| 40  | 07120160-015 | CHV-160-015  | SNAP RING WASHER   | 1    |               |        |

## SAFEWAY MACHINERY INDUSTRY CORPORATION

## PART LISTS

MODEL:CHV-100V

DATE:8 JULY. 1998

MECH./HYDR. MC COMPACT VISE.

Computer No.07120100

|    |                |               |                        |   |          |  |
|----|----------------|---------------|------------------------|---|----------|--|
| 41 | 07120160-016   | CHV-160-016   | COLLAR                 | 1 |          |  |
| 42 | SCM05X16       | SCM05X16      | SOCKET CAP SCREW       | 3 | M5X16L   |  |
| 43 | SR-R-42        | SR-R-42       | SNAP RING              | 2 | R42      |  |
| 44 | 07120160-020   | CHV-160-020   | CHIP SEAL              | 2 |          |  |
| 45 | SSM06X08L      | SSM06X08L     | SET SCREW              | 2 | M6X8L    |  |
| 46 | WS6203         | WS6203        | SPRING WASHER          | 4 | 6203     |  |
| 47 | 07120160-021   | CHV-160-021   | SPRING WASHER          | 1 |          |  |
| 48 | 07120130-022   | CHV-130-022   | ADJUSTING SCREW        | 1 |          |  |
| 49 | 07120160-023   | CMV-160-023   | CHIP COVER BLOCK       | 2 |          |  |
| 50 | SCM06X10L      | SCM06X10L     | SOCKET CAP SCREW       | 2 | M6X10L   |  |
| 51 | SCM12X40L      | SCM12X40L     | SOCKET CAP SCREW       | 4 | M12X40L  |  |
| 52 | OC-1/4"        | OC-1/4"       | OIL CAP                | 1 | 1/4"     |  |
| 53 | 07800160-006   | PHV-160-006   | SEMI-SPHERE SEGMENT    | 1 |          |  |
| 54 | SCM10X20L      | SCM10X20L     | SOCKET CAP SCREW       | 4 | M10X20L  |  |
| 55 | 07120100-024   | CHV-100-024   | CHIP COVER GUIDE       | 1 |          |  |
| 56 | SSM06X08L      | SSM06X08L     | SET SCREW              | 4 | M6X8L    |  |
| 57 | 07120160-025   | CHV-160-025   | WISE CLAMP BLOCK       | 4 |          |  |
| 58 | SDM04X08L      | SDM04X08L     | ROUND SOCKET CAP SCREW | 2 | M04X08L  |  |
| 59 | 07120160-026   | CHV-100-026   | CHIP COVER (FORWARD 1) | 1 |          |  |
| 60 | 07120160-027   | CMV-100-027   | CHIP COVER (FORWARD 2) | 1 |          |  |
| 61 | 07120160-028-1 | CHV-100-028-1 | CHIP COVER             | 1 | 50m/m    |  |
|    | 07120160-028-2 | CHV-100-028-2 | CHIP COVER             | 1 | 100m/m   |  |
|    | 07120160-028-3 | CHV-100-028-3 | CHIP COVER             | 1 | 150m/m   |  |
| 62 | 07800200-058   | PHV-160-058   | GUIDE KEY              | 2 | 16m/m    |  |
| 63 | SCM06X10L      | SCM06X10L     | SOCKET CAP SCREW       | 2 | M6X10L   |  |
| 64 | 07800160-054   | PHV-160-054   | HANDLE                 | 1 |          |  |
| 65 | GR-001         | GR-001        | HANDLE GRIP            | 1 | 10m/m    |  |
| 66 | 07120160-029   | CHV-160-029   | NAME PLATES            | 2 | CHV-100V |  |
| 67 | SDM04X08L      | SDM04X08L     | ROUND SET SCREW        | 4 | M4X8L    |  |

## SAFEWAY MACHINERY INDUSTRY CORPORATION

## PART LISTS

MODEL:CHV-130V

DATE:8 JULY. 1998

MECH./HYDR. MC COMPACT VISE.

Computer No.07120130

| NO. | Computer No. | Part No.     | Part Name          | Q'ty | Specification | Remark |
|-----|--------------|--------------|--------------------|------|---------------|--------|
| 1   | 07120130-001 | CHV-130-001  | MAIN BODY          | 1    |               |        |
| 2   | 07120130-002 | CHV-130-002  | MAIN SCREW SUPPORT | 1    |               |        |
| 3   | 07120130-003 | CHV-130-003  | MOVABLE            | 1    |               |        |
| 4   | 07120130-004 | CHV-130-004  | JAW PLATES         | 2    |               |        |
| 5   | 07120130-005 | CHV-130-005  | LOCK DOWN BODY     | 1    |               |        |
| 6   | 07120160-006 | CHV-160-006  | SEAL COVER         | 1    |               |        |
| 7   | 07120130-007 | CHV-130-007  | MAIN SCREW         | 1    |               |        |
| 8   | 07800160-029 | PHV-160-029  | KEY                | 1    | 12X25X5       |        |
| 9   | 07120160-008 | CHV-160-008  | COLLAR             | 1    |               |        |
| 10  | OS352007     | OS352007     | CHIP SEAL          | 1    | 35X20X7       |        |
| 11  | 07120160-009 | CHV-160-009  | PISTON             | 1    |               |        |
| 12  | 07120160-010 | CHV-160-010  | CYLINDER BODY      | 1    |               |        |
| 13  | 07120160-011 | CHV-160-011  | SLEEVE             | 1    |               |        |
| 14  | 07120160-012 | CHV-160-012  | POWER PUSH ROD     | 1    |               |        |
| 15  | 07800160-034 | PHV-160-034  | CLUTCH(III)        | 1    |               |        |
| 16  | 07800160-033 | PHV-160-033  | CLUTCH(II)         | 1    |               |        |
| 17  | 07800160-035 | PHV-160-035  | MINOR SCREW ROD    | 1    |               |        |
| 18  | RO4X4        | RO4X4        | ROLLER             | 4    | 4X4M/M        |        |
| 19  | 07800160-037 | PHV-160-037  | CLUTCH SPRING      | 1    |               |        |
| 20  | 07800160-036 | PHV-160-036  | CLUTCH WASHER      | 1    |               |        |
| 21  | SR-S-14      | SR-S-14      | SNAP RING          | 1    | S-14          |        |
| 22  | SB03         | SB03         | STEEL BALL         | 1    | 3M/M          |        |
| 23  | SSM06X08L    | SSM06X08L    | SET SCREW          | 1    | M6X8L         |        |
| 24  | SSM06X08L    | SSM06X08L    | SET REW            | 2    | M6X8L         |        |
| 25  | SB04         | SB04         | STEEL BALL         | 26   | 4M/M          |        |
| 26  | 07800160-027 | PHV-160-027  | BACKUP RING        | 1    |               |        |
| 27  | OS201006     | OS201006     | OIL-SEAL           | 1    | 20X10X06      |        |
| 28  | 07800160-021 | PHV-160-021  | PACKING RING       | 1    |               |        |
| 29  | 07800160-026 | PHV-160-026  | BOSTER RING        | 1    |               |        |
| 30  | OS352508     | OS352508     | OIL-SEAL           | 1    | 35X25X08      |        |
| 31  | OR-P-28      | OR-P-28      | O-RING             | 1    | P-28          |        |
| 32  | SSM06X10L    | SSM06X10L    | SET SCREW          | 1    | M6X10L        |        |
| 33  | DS204015     | DS204015     | DISC SPRING        | 1    | 20X40X1.5     |        |
| 34  | 07120160-013 | 07120160-013 | KEY                | 1    | 10X4X15L      |        |
| 35  | SSM06X08L    | SSM06X08L    | SET SCREW          | 1    | M6X8L         |        |
| 36  | 07800160-024 | PHV-160-024  | OIL PLUG           | 1    |               |        |
| 37  | OR-P-10      | OR-P-10      | O-RING             | 2    | P-10          |        |
| 38  | 07800160-025 | PHV-160-025  | OIL PLUG SEAL      | 1    |               |        |
| 39  | WS212        | WS212        | SNAP RING          | 1    |               |        |
| 40  | 07120160-015 | CHV-160-015  | SNAP RING WASHER   | 1    |               |        |

## SAFEGWAY MACHINERY INDUSTRY CORPORATION

## PART LISTS

MODEL:CHV-130V

DATE:8 JULY, 1998

MECH./HYDR. MC COMPACT VISE.

Computer No.07120130

|    |                |               |                        |   |         |  |
|----|----------------|---------------|------------------------|---|---------|--|
| 41 | 07120160-016   | CHV-160-016   | COLLAR                 | 1 |         |  |
| 42 | SCM05X16       | SCM05X16      | SOCKET CAP SCREW       | 3 | M5X16L  |  |
| 43 | SR-R-42        | SR-R-42       | SNAP RING              | 2 | R42     |  |
| 44 | 07120160-020   | CHV-160-020   | CHIP SEAL              | 2 |         |  |
| 45 | SSM06X08L      | SSM06X08L     | SET SCREW              | 2 | M6X8L   |  |
| 46 | WS6203         | WS6203        | SPRING WASHER          | 4 | 6203    |  |
| 47 | 07120160-021   | CHV-160-021   | SPRING WASHER          | 1 |         |  |
| 48 | 07120130-022   | CHV-130-022   | ADJUSTING SCREW        | 1 |         |  |
| 49 | 07120160-023   | CMV-160-023   | CHIP COVER BLOCK       | 2 |         |  |
| 50 | SCM06X10L      | SCM06X10L     | SOCKET CAP SCREW       | 2 | M6X10L  |  |
| 51 | SCM10X40L      | SCM10X40L     | SOCKET CAP SCREW       | 4 | M10X40L |  |
| 52 | OC-1/4"        | OC-1/4"       | OIL CAP                | 1 | 1/4"    |  |
| 53 | 07800160-006   | PHV-160-006   | SEMI-SPHERE SEGMENT    | 1 |         |  |
| 54 | SCM10X20L      | SCM10X20L     | SOCKET CAP SCREW       | 4 | M10X20L |  |
| 55 | 07120130-024   | CHV-100-024   | CHIP COVER GUIDE       | 1 |         |  |
| 56 | SSM06X08L      | SSM06X08L     | SET SCREW              | 4 | M6X8L   |  |
| 57 | 07120160-025   | CHV-160-025   | VISE CLAMP BLOCK       | 4 |         |  |
| 58 | SDM04X08L      | SDM04X08L     | ROUND SOCKET CAP SCREW | 2 | M04X08L |  |
| 59 | 07130130-026   | CHV-130-026   | CHIP COVER (FORWARD 1) | 1 |         |  |
| 60 | 07120130-027   | CMV-100-027   | CHIP COVER (FORWARD 2) | 1 |         |  |
| 61 | 07120130-028-1 | CHV-130-028-1 | CHIP COVER             | 1 | 50m/m   |  |
|    | 07120130-028-2 | CHV-130-028-2 | CHIP COVER             | 1 | 100m/m  |  |
|    | 07120130-028-3 | CHV-130-028-3 | CHIP COVER             | 1 | 150m/m  |  |
|    | 07120130-028-4 | CHV-130-028-4 | CHIP COVER             | 1 | 200m/m  |  |
| 62 | 07800200-058   | PHV-160-058   | GUIDE KEY              | 2 | 18m/m   |  |
| 63 | SCM06X10L      | SCM06X10L     | SOCKET CAP SCREW       | 2 | M6X10L  |  |
| 64 | 07800100-054   | 07800100-054  | HANDLE                 | 1 |         |  |
| 65 | GR-001         | GR-001        | HANDLE GRIP            | 1 | 10m/m   |  |
| 66 | 07120130-029   | CHV-130-029   | NAME PLATES            | 2 |         |  |
| 67 | SDM04X08L      | SDM04X08L     | ROUND SET SCREW        | 4 | M4X8L   |  |

## SAFEWAY MACHINERY INDUSTRY CORPORATION

## PART LISTS

MODEL:CHV-160V

DATE:8 JULY. 1998

MECH./HYDR. MC COMPACT VISE.

Computer No.07120160

| NO. | Computer No. | Part No.     | Part Name          | Q'ty | Specification | Remark |
|-----|--------------|--------------|--------------------|------|---------------|--------|
| 1   | 07120160-001 | CHV-160-001  | MAIN BODY          | 1    |               |        |
| 2   | 07120160-002 | CHV-160-002  | MAIN SCREW SUPPORT | 1    |               |        |
| 3   | 07120160-003 | CHV-160-003  | MOVABLE            | 1    |               |        |
| 4   | 07120160-004 | CHV-160-004  | JAW PLATES         | 2    |               |        |
| 5   | 07120160-005 | CHV-160-005  | LOCK DOWN BODY     | 1    |               |        |
| 6   | 07120160-006 | CHV-160-006  | SEAL COVER         | 1    |               |        |
| 7   | 07120160-007 | CHV-160-007  | MAIN SCREW         | 1    |               |        |
| 8   | 07800160-029 | PHV-160-029  | KEY                | 1    | 12X25X5       |        |
| 9   | 07120160-008 | CHV-160-008  | COLLAR             | 1    |               |        |
| 10  | OS352007     | OS352007     | CHIP SEAL          | 1    | 35X20X7       |        |
| 11  | 07120160-009 | CHV-160-009  | PISTON             | 1    |               |        |
| 12  | 07120160-010 | CHV-160-010  | CYLINDER BODY      | 1    |               |        |
| 13  | 07120160-011 | CHV-160-011  | SLEEVE             | 1    |               |        |
| 14  | 07120160-012 | CHV-160-012  | POWER PUSH ROD     | 1    |               |        |
| 15  | 07800160-034 | PHV-160-034  | CLUTCH(11)         | 1    |               |        |
| 16  | 07800160-033 | PHV-160-033  | CLUTCH(11)         | 1    |               |        |
| 17  | 07800160-035 | PHV-160-035  | MINOR SCREW ROD    | 1    |               |        |
| 18  | R04X4        | RO4X4        | ROLLER             | 4    | 4X4M/M        |        |
| 19  | 07800160-037 | PHV-160-037  | CLUTCH SPRING      | 1    |               |        |
| 20  | 07800160-036 | PHV-160-036  | CLUTCH WASHER      | 1    |               |        |
| 21  | SR-S-14      | SR-S-14      | SNAP RING          | 1    | S-14          |        |
| 22  | SB03         | SB03         | STEEL BALL         | 1    | 3M/M          |        |
| 23  | SSM06X08L    | SSM06X08L    | SET SCREW          | 1    | M6X8L         |        |
| 24  | SSM06X08L    | SSM06X08L    | SET SCREW          | 2    | M6X8L         |        |
| 25  | SB04         | SB04         | STEEL BALL         | 26   | 4M/M          |        |
| 26  | 07800160-027 | PHV-160-027  | BACKUP RING        | 1    |               |        |
| 27  | OS201006     | OS201006     | OIL-SEAL           | 1    | 20X10X06      |        |
| 28  | 07800160-021 | PHV-160-021  | PACKING RING       | 1    |               |        |
| 29  | 07800160-026 | PHV-160-026  | BOSTER RING        | 1    |               |        |
| 30  | OS352508     | OS352508     | OIL-SEAL           | 1    | 35X25X08      |        |
| 31  | OR-P-28      | OR-P-28      | O-RING             | 1    | P-28          |        |
| 32  | SSM06X10L    | SSM06X10L    | SET SCREW          | 1    | M6X10L        |        |
| 33  | DS204015     | DS204015     | DISC SPRING        | 1    | 20X40X1.5     |        |
| 34  | 07120160-013 | 07120160-013 | KEY                | 1    | 10X4X15L      |        |
| 35  | SSM06X08L    | SSM06X08L    | SET SCREW          | 1    | M6X8L         |        |
| 36  | 07800160-024 | PHV-160-024  | OIL PLUG           | 1    |               |        |
| 37  | OR-P-10      | OR-P-10      | O-RING             | 2    | P-10          |        |
| 38  | 07800160-025 | PHV-160-025  | OIL PLUG SEAL      | 1    |               |        |
| 39  | WS212        | WS212        | SNAP RING          | 1    |               |        |
| 40  | 07120160-015 | CHV-160-015  | SNAP RING WASHER   | 1    |               |        |

## SAFEWAY MACHINERY INDUSTRY CORPORATION

## PART LISTS

MODEL:CHV-160V

DATE:8 JULY. 1998

MECH./HYDR. MC COMPACT VISE.

Computer No.07120160

|    |                |               |                        |   |         |  |
|----|----------------|---------------|------------------------|---|---------|--|
| 41 | 07120160-016   | CHV-160-016   | COLLAR                 | 1 |         |  |
| 42 | SCM05X16       | SCM05X16      | SOCKET CAP SCREW       | 3 | M5X16L  |  |
| 43 | SR-R-42        | SR-R-42       | SNAP RING              | 2 | R42     |  |
| 44 | 07120160-020   | CHV-160-020   | CHIP SEAL              | 2 |         |  |
| 45 | SSM06X08L      | SSM06X08L     | SET SCREW              | 2 | M6X8L   |  |
| 46 | WS6203         | WS6203        | SPRING WASHER          | 4 | 6203    |  |
| 47 | 07120160-021   | CHV-160-021   | SPRING WASHER          | 1 |         |  |
| 48 | 07120160-022   | CHV-160-022   | ADJUSTING SCREW        | 1 |         |  |
| 49 | 07120160-023   | CMV-160-023   | CHIP COVER BLOCK       | 2 |         |  |
| 50 | SCM06X10L      | SCM06X10L     | SOCKET CAP SCREW       | 2 | M6X10L  |  |
| 51 | SCM12X40L      | SCM12X40L     | SOCKET CAP SCREW       | 4 | M12X40L |  |
| 52 | OC-1/4"        | OC-1/4"       | OIL CAP                | 1 | 1/4"    |  |
| 53 | 07800160-006   | PHV-160-006   | SEMI-SPHERE SEGMENT    | 1 |         |  |
| 54 | SCM10X20L      | SCM10X20L     | SOCKET CAP SCREW       | 4 | M10X20L |  |
| 55 | 07120160-024   | CHV-160-024   | CHIP COVER GUIDE       | 1 |         |  |
| 56 | SSM06X08L      | SSM06X08L     | SET SCREW              | 4 | M6X8L   |  |
| 57 | 07120160-025   | CHV-160-025   | WISE CLAMP BLOCK       | 4 |         |  |
| 58 | SDM04X08L      | SDM04X08L     | ROUND SOCKET CAP SCREW | 2 | M04X08L |  |
| 59 | 07120160-026   | CHV-160-026   | CHIP COVER (FORWARD 1) | 1 |         |  |
| 60 | 07120160-027   | CMV-160-027   | CHIP COVER (FORWARD 2) | 1 |         |  |
| 61 | 07120160-028-1 | CHV-160-028-1 | CHIP COVER             | 1 | 60m/m   |  |
|    | 07120160-028-2 | CHV-160-028-2 | CHIP COVER             | 1 | 110m/m  |  |
|    | 07120160-028-3 | CHV-160-028-3 | CHIP COVER             | 1 | 160m/m  |  |
|    | 07120160-028-4 | CHV-160-028-4 | CHIP COVER             | 1 | 210m/m  |  |
|    | 07120160-028-5 | CHV-160-028-5 | CHIP COVER             | 1 | 260m/m  |  |
| 62 | 07800200-058   | PHV-200-058   | GUIDE KEY              | 2 | 18m/m   |  |
| 63 | SCM06X10L      | SCM06X10L     | SOCKET CAP SCREW       | 2 | M6X10L  |  |
| 64 | 07800160-054   | PHV-160-054   | HANDLE                 | 1 |         |  |
| 65 | GR-001         | GR-001        | HANDLE GRIP            | 1 | 10m/m   |  |
| 66 | 07120160-029   | CHV-160-029   | NAME PLATES            | 2 |         |  |
| 67 | SDM04X08L      | SDM04X08L     | ROUND SET SCREW        | 4 | M4X8L   |  |

## SAFEWAY MACHINERY INDUSTRY CORPORATION

## PART LISTS

MODEL:CHV-200V

DATE:8 JULY. 1998

MECH./HYDR. MC COMPACT VISE.

Computer No.07120200

| NO. | Computer No. | Part No.     | Part Name          | Q'ty | Specification | Remark |
|-----|--------------|--------------|--------------------|------|---------------|--------|
| 1   | 07120200-001 | CHV-200-001  | MAIN BODY          | 1    |               |        |
| 2   | 07120200-002 | CHV-200-002  | MAIN SCREW SUPPORT | 1    |               |        |
| 3   | 07120200-003 | CHV-200-003  | MOVABLE            | 1    |               |        |
| 4   | 07120200-004 | CHV-200-004  | JAW PLATES         | 2    |               |        |
| 5   | 07120200-005 | CHV-200-005  | LOCK DOWN BODY     | 1    |               |        |
| 6   | 07120200-006 | CHV-200-006  | SEAL COVER         | 1    |               |        |
| 7   | 07120200-007 | CHV-200-007  | MAIN SCREW         | 1    |               |        |
| 8   | 07800160-029 | PHV-160-029  | KEY                | 1    | 12X25X5       |        |
| 9   | 07120200-008 | CHV-200-008  | COLLAR             | 1    |               |        |
| 10  | OS352007     | OS352007     | CHIP SEAL          | 1    | 35X20X7       |        |
| 11  | 07120160-009 | CHV-160-009  | PISTON             | 1    |               |        |
| 12  | 07120160-010 | CHV-160-010  | CYLINDER BODY      | 1    |               |        |
| 13  | 07120160-011 | CHV-160-011  | SLEEVE             | 1    |               |        |
| 14  | 07120160-012 | CHV-160-012  | POWER PUSH ROD     | 1    |               |        |
| 15  | 07800160-034 | PHV-160-034  | CLUTCH([H])        | 1    |               |        |
| 16  | 07800160-033 | PHV-160-033  | CLUTCH([H])        | 1    |               |        |
| 17  | 07800160-035 | PHV-160-035  | MINOR SCREW ROD    | 1    |               |        |
| 18  | R04X4        | RO4X4        | ROLLER             | 4    | 4X4M/M        |        |
| 19  | 07800160-037 | PHV-160-037  | CLUTCH SPRING      | 1    |               |        |
| 20  | 07800160-036 | PHV-160-036  | CLUTCH WASHER      | 1    |               |        |
| 21  | SR-S-14      | SR-S-14      | SNAP RING          | 1    | S-14          |        |
| 22  | SB03         | SB03         | STEEL BALL         | 1    | 3M/M          |        |
| 23  | SSM06X08L    | SSM06X08L    | SET SCREW          | 1    | M6X8L         |        |
| 24  | SSM06X08L    | SSM06X08L    | SET SCREW          | 2    | M6X8L         |        |
| 25  | SB04         | SB04         | STEEL BALL         | 26   | 4M/M          |        |
| 26  | 07800160-027 | PHV-160-027  | BACKUP RING        | 1    |               |        |
| 27  | OS201006     | OS201006     | OIL-SEAL           | 1    | 20X10X06      |        |
| 28  | 07800160-021 | PHV-160-021  | PACKING RING       | 1    |               |        |
| 29  | 07800160-026 | PHV-160-026  | BOSTER RING        | 1    |               |        |
| 30  | OS352508     | OS352508     | OIL-SEAL           | 1    | 35X25X08      |        |
| 31  | OR-P-28      | OR-P-28      | O-RING             | 1    | P-28          |        |
| 32  | SSM06X10L    | SSM06X10L    | SET SCREW          | 1    | M6X10L        |        |
| 33  | DS204015     | DS204015     | DISC SPRING        | 1    | 20X40X1.5     |        |
| 34  | 07120160-013 | 07120160-013 | KEY                | 1    | 10X4X15L      |        |
| 35  | SSM06X08L    | SSM06X08L    | SET SCREW          | 1    | M6X8L         |        |
| 36  | 07800160-024 | PHV-160-024  | OIL PLUG           | 1    |               |        |
| 37  | OR-P-10      | OR-P-10      | O-RING             | 2    | P-10          |        |
| 38  | 07800160-025 | PHV-160-025  | OIL PLUG SEAL      | 1    |               |        |
| 39  | WS212        | WS212        | SNAP RING          | 1    |               |        |
| 40  | 07120160-015 | CHV-160-015  | SNAP RING WASHER   | 1    |               |        |
| 41  | 07120160-016 | CHV-160-016  | COLLAR             | 1    |               |        |

## SAFEWAY MACHINERY INDUSTRY CORPORATION

## PART LISTS

MODEL:CHV-200V

DATE:8 JULY. 1998

MECH./HYDR. MC COMPACT VISE.

Computer No.07120200

|    |                |               |                        |   |         |  |
|----|----------------|---------------|------------------------|---|---------|--|
| 42 | SCM05X16       | SCM05X16      | SOCKET CAP SCREW       | 3 | M5X16L  |  |
| 43 | SR-R-42        | SR-R-42       | SNAP RING              | 2 | R47     |  |
| 44 | 07120200-020   | CHV-200-020   | CHIP SEAL              | 2 |         |  |
| 45 | SSM06X08L      | SSM06X08L     | SET SCREW              | 2 | M6X8L   |  |
| 46 | WS6204         | WS6204        | SPRING WASHER          | 4 | 6204    |  |
| 47 | 07120160-021   | CHV-160-021   | SPRING WASHER          | 1 |         |  |
| 48 | 07120200-022   | CHV-200-022   | ADJUSTING SCREW        | 1 |         |  |
| 49 | 07120160-023   | CMV-160-023   | CHIP COVER BLOCK       | 2 |         |  |
| 50 | SCM06X10L      | SCM06X10L     | SOCKET CAP SCREW       | 2 | M6X10L  |  |
| 51 | SCM12X40L      | SCM12X40L     | SOCKET CAP SCREW       | 4 | M12X40L |  |
| 52 | OC-1/4"        | OC-1/4"       | OIL CAP                | 1 | 1/4"    |  |
| 53 | 07800200-006   | PHV-200-006   | SEMI-SPHERE SEGMENT    | 1 |         |  |
| 54 | SCM10X20L      | SCM10X20L     | SOCKET CAP SCREW       | 4 | M10X20L |  |
| 55 | 07120200-024   | CHV-200-024   | CHIP COVER GUIDE       | 1 |         |  |
| 56 | SSM06X08L      | SSM06X08L     | SET SCREW              | 4 | M6X8L   |  |
| 57 | 07120160-025   | CHV-160-025   | WISE CLAMP BLOCK       | 4 |         |  |
| 58 | SDM04X08L      | SDM04X08L     | ROUND SOCKET CAP SCREW | 2 | M04X08L |  |
| 59 | 07120200-026   | CHV-200-026   | CHIP COVER (FORWARD 1) | 1 |         |  |
| 60 | 07120200-027   | CMV-200-027   | CHIP COVER (FORWARD 2) | 1 |         |  |
| 61 | 07120200-028-1 | CHV-200-028-1 | CHIP COVER             | 1 | 60m/m   |  |
|    | 07120200-028-2 | CHV-200-028-2 | CHIP COVER             | 1 | 110m/m  |  |
|    | 07120200-028-3 | CHV-200-028-3 | CHIP COVER             | 1 | 160m/m  |  |
|    | 07120200-028-4 | CHV-200-028-4 | CHIP COVER             | 1 | 210m/m  |  |
|    | 07120200-028-5 | CHV-200-028-5 | CHIP COVER             | 1 | 260m/m  |  |
|    | 07120200-028-6 | CHV-200-028-6 | CHIP COVER             | 1 | 310m/m  |  |
| 62 | 07800200-058   | PHV-200-058   | GUIDE KEY              | 2 | 18m/m   |  |
| 63 | SCM06X10L      | SCM06X10L     | SOCKET CAP SCREW       | 2 | M6X10L  |  |
| 64 | 07800160-054   | PHV-160-054   | HANDLE                 | 1 |         |  |
| 65 | GR-001         | GR-001        | HANDLE GRIP            | 1 | 10m/m   |  |
| 66 | 07120160-029   | CHV-160-029   | NAME PLATES            | 2 |         |  |
| 67 | SDM04X08L      | SDM04X08L     | ROUND SET SCREW        | 4 | M4X8L   |  |