

MOTOMAN-MH5S/MH5F INSTRUCTIONS

TYPE:**YR-MH0005S-A02 (METAL COVER SPECIFICATIONS DX100)****YR-MH0005F-A02 (METAL COVER SPECIFICATIONS FS100)**

Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

MOTOMAN INSTRUCTIONS**MOTOMAN-MH5S/MH5F INSTRUCTIONS****DX100 INSTRUCTIONS****DX100 OPERATOR'S MANUAL****DX100 MAINTENANCE MANUAL****FS100 INSTRUCTIONS****FS100 OPERATOR'S MANUAL****FS100 MAINTENANCE MANUAL**

The operator's manual above corresponds to specific usage.
Be sure to use the appropriate manual.

Part Number: 176729-1CD

Revision: 0

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Introduction

This supplementary instruction manual describes how YR-MH0005S-A02/ YR-MH0005F-A02 (hereinafter referred to as MH5S-A02/MH5F-A02) is different from the YR-MH0005S-A00/YR-MH0005F-A00 (hereinafter referred to as MH5S-A00/MH5F-A00).

Read this supplementary instruction manual thoroughly together with the following instruction manual:

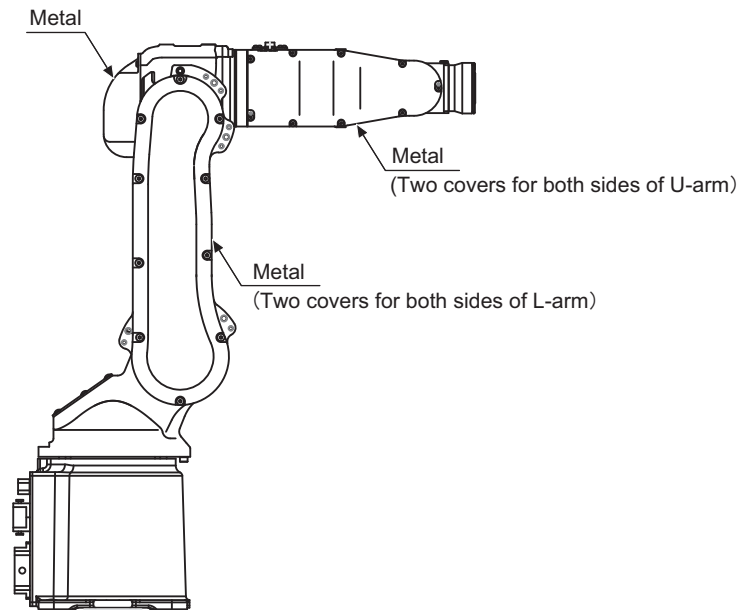
“MOTOMAN INSTRUCTIONS”

(Type: MH5S-A02/MH5F-A02 for standard specification,
Part No. 160475-1CD))

Points of Differences

The MH5S-A02/MH5F-A02 differs from the MH5S-A00/MH5F-A00 in the following points:

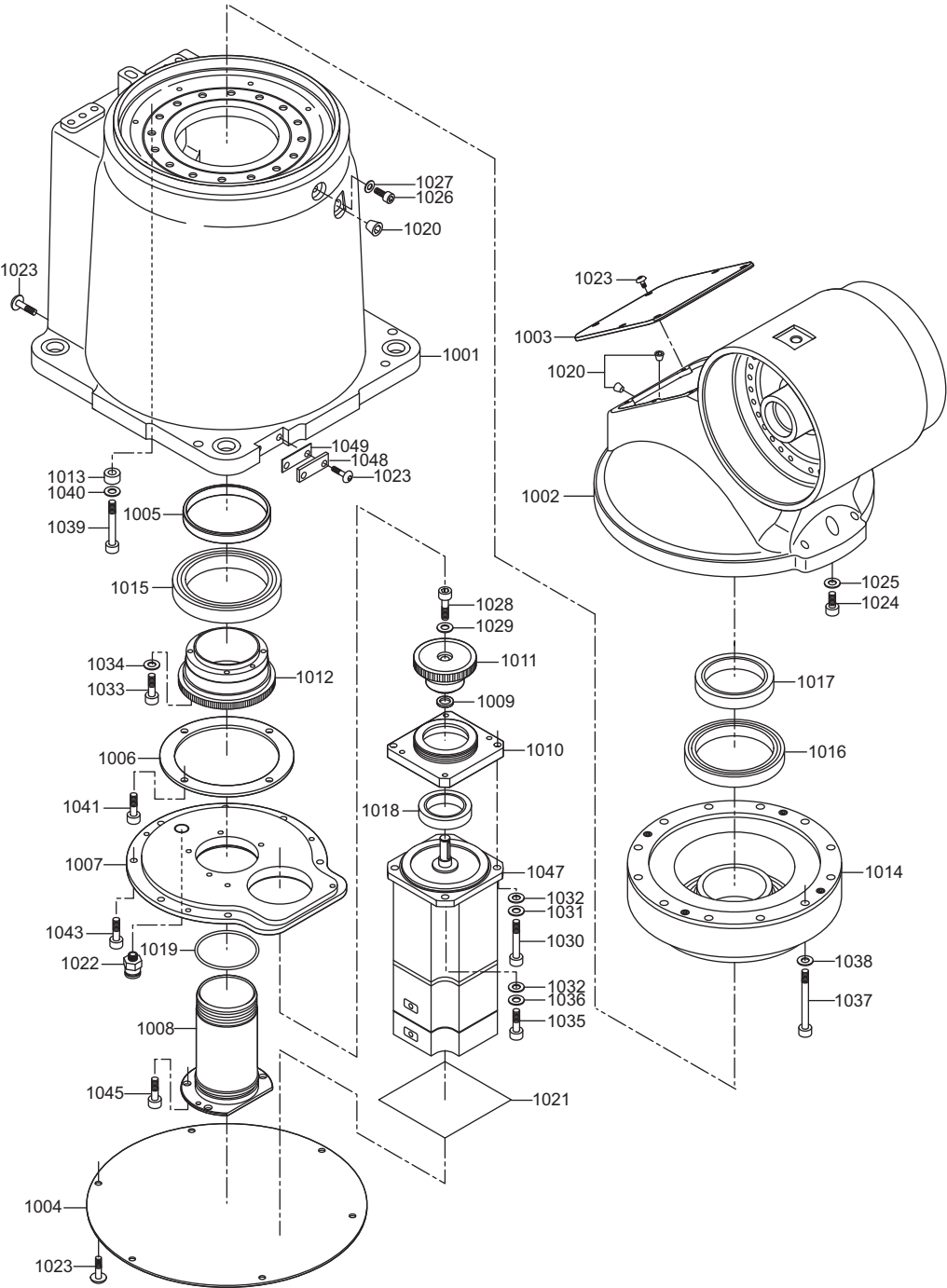
Fig. 1-1: Covering material



11 Parts List

11.1 S-Axis Unit

Fig. 11-1: S-Axis Unit



11.1 S-Axis Unit

Table 11-1: S-Axis Unit (Sheet 1 of 2)

| No. | DWG No. | Name | Pcs |
|------|-------------------------|-------------------------------------|-----|
| 1001 | HW1100159-1 | Base | 1 |
| 1002 | HW1100160-1 | S head | 1 |
| 1003 | HW1302004-1 | Cover | 1 |
| 1004 | HW0314328-1 | Cover | 1 |
| 1005 | HW0414024-1 | Collar | 1 |
| 1006 | HW0414025-1 | B holder | 1 |
| 1007 | HW0414034-1 | M base | 1 |
| 1008 | HW0314319-1 | Shaft | 1 |
| 1009 | HW0412383-1 | Gasket | 1 |
| 1010 | HW0414064-1 | M base | 1 |
| 1011 | HW0314707-1 | Gear | 1 |
| 1012 | HW0314708-2 | Gear | 1 |
| 1013 | HW8411125-2 | Washer | 16 |
| 1014 | HW0389176-A | Speed reducer | 1 |
| 1015 | 6811LLU | Bearing | 1 |
| 1016 | 6810VV*NS7* | Bearing | 1 |
| 1017 | TC405208 (AE2343E0) | Oil seal | 1 |
| 1018 | TC25356*FKM* (AE1292G0) | Oil seal | 1 |
| 1019 | S39 | O ring | 1 |
| 1020 | PT1/8 | Plug | 2 |
| 1021 | HW9481967-B | Sheet | 4 |
| 1022 | POC6-01M | Union | 1 |
| 1023 | M4X10 | Hexagon socket button head screw | 22 |
| 1024 | M8X16 | Hexagon socket head cap screw | 1 |
| 1025 | 2L-8 | Spring washer | 1 |
| 1026 | M6X8 | Hexagon socket head cap screw | 1 |
| 1027 | 2L-6 | Spring washer | 1 |
| 1028 | M5X16 | Hexagon socket head cap screw | 1 |
| 1029 | 2L-5 | Spring washer | 1 |
| 1030 | M4X25 | Hexagon socket head cap screw | 2 |
| 1031 | 2L-4 | Spring washer | 2 |
| 1032 | M4 | Washer | 4 |
| 1033 | M3X30 | Hexagon socket head cap screw | 6 |
| 1034 | CDW-L3 | Spring washer | 6 |
| 1035 | M4X14 | Hexagon socket head cap screw | 2 |
| 1036 | 2L-4 | Spring washer | 2 |
| 1037 | M5X40 | Hexagon socket head cap screw | 12 |
| 1038 | 2L-5 | Spring washer | 12 |
| 1039 | M5X30 | Hexagon socket head cap screw | 16 |
| 1040 | 2L-5 | Spring washer | 16 |

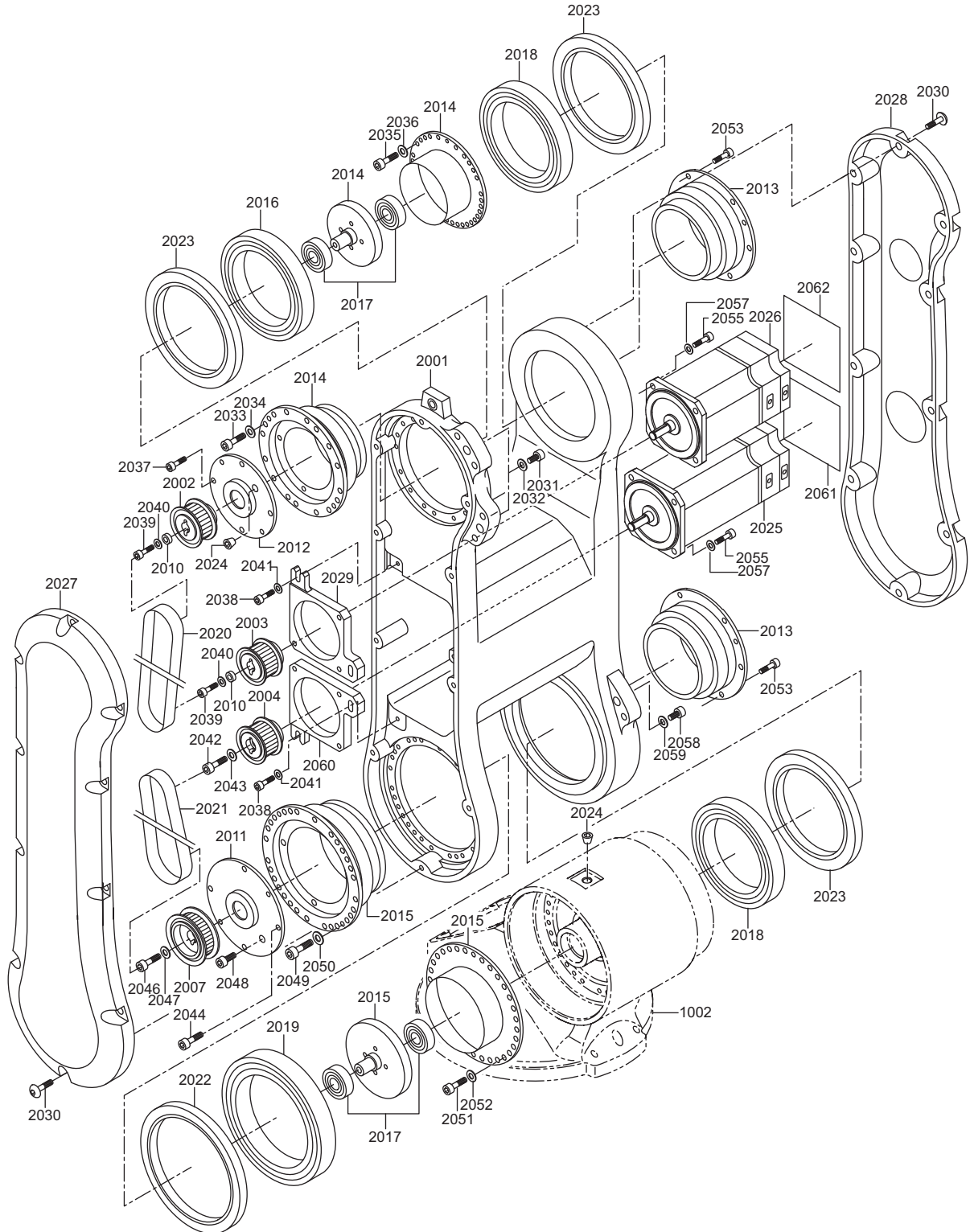
11.1 S-Axis Unit

Table 11-1: S-Axis Unit (Sheet 2 of 2)

| No. | DWG No. | Name | Pcs |
|------------|------------------|-------------|------------|
| 1041 | M4X10 | GT-SA bolt | 4 |
| 1043 | M4X16 | GT-SA bolt | 7 |
| 1045 | M4X12 | GT-SA bolt | 4 |
| 1047 | SGMAV-04ANA-YR11 | Motor | 1 |
| 1048 | HW0414483-1 | Cover | 1 |
| 1049 | HW0414484-1 | Gasket | 1 |

11.2 L-, U-Axes Unit

Fig. 11-2: L-, U-Axes Unit



11.2 L-, U-Axes Unit

Table 11-2: L-, U-Axes Unit (Sheet 1 of 2)

| No. | DWG No. | Name | Pcs |
|------------|-------------------------|-------------------------------------|------------|
| 2001 | HW1100161-1 | L arm | 1 |
| 2002 | HW0414073-A | Pulley | 1 |
| 2003 | HW0414072-A | Pulley | 1 |
| 2004 | HW0414070-B | Pulley | 1 |
| 2007 | HW0414071-B | Pulley | 1 |
| 2010 | HW8411125-1 | Collar | 2 |
| 2011 | HW0408927-2 | Housing | 1 |
| 2012 | HW0408928-2 | Housing | 1 |
| 2013 | HW0408931-3 | Housing | 2 |
| 2014 | HW0388707-A | Speed reducer | 1 |
| 2015 | HW0388706-A | Speed reducer | 1 |
| 2016 | 6913DDU | Bearing | 1 |
| 2017 | 6000ZZ | Bearing | 4 |
| 2018 | 6913ZZ | Bearing | 2 |
| 2019 | 6916DDU | Bearing | 1 |
| 2020 | 100S5M390 | Belt | 1 |
| 2021 | 100S5M305 | Belt | 1 |
| 2022 | SC901107 (BC0604-E00X1) | Oil seal | 1 |
| 2023 | SC751007 (AC3613-E00X3) | Oil seal | 3 |
| 2024 | LP-M5 | Plug | 2 |
| 2025 | SGMAV-04ANA-YR11 | Motor | 1 |
| 2026 | SGMAV-02A2A-YR11 | Motor | 1 |
| 2027 | HW0200555-1 | Cover | 1 |
| 2028 | HW0200555-2 | Cover | 1 |
| 2029 | HW0414027-1 | M base | 1 |
| 2030 | M5X10 | Hexagon socket button head screw | 20 |
| 2031 | M8X16 | Hexagon socket head cap screw | 2 |
| 2032 | 2L-8 | Spring washer | 2 |
| 2033 | M4X12 | Hexagon socket head cap screw | 16 |
| 2034 | 2L-4 | Spring washer | 16 |
| 2035 | M3X10 | Hexagon socket head cap screw | 32 |
| 2036 | CDW-L3 | Spring washer | 32 |
| 2037 | M4X10 | GT-SA bolt | 4 |
| 2038 | M4X16 | GT-SA bolt | 4 |
| 2039 | M4X18 | Hexagon socket head cap screw | 2 |
| 2040 | 2L-4 | Spring washer | 2 |
| 2041 | M4 | Washer | 4 |
| 2042 | M5X16 | Hexagon socket head cap screw | 1 |
| 2043 | 2L-5 | Spring washer | 1 |
| 2044 | M4X10 | GT-SA bolt | 4 |
| 2046 | M5X20 | Hexagon socket head cap screw | 1 |
| 2047 | 2L-5 | Spring washer | 1 |

11.2 L-, U-Axes Unit

Table 11-2: L-, U-Axes Unit (Sheet 2 of 2)

| No. | DWG No. | Name | Pcs |
|------------|----------------|-------------------------------|------------|
| 2048 | M6X8 | Hexagon socket head cap screw | 1 |
| 2049 | M4X12 | Hexagon socket head cap screw | 29 |
| 2050 | CDW4L | Spring washer | 29 |
| 2051 | M4X16 | Hexagon socket head cap screw | 30 |
| 2052 | 2L-4 | Spring washer | 30 |
| 2053 | M4X10 | GT-SA bolt | 12 |
| 2055 | M4X16 | GT-SA bolt | 6 |
| 2057 | M4 | Washer | 6 |
| 2058 | M8X16 | Hexagon socket head cap screw | 2 |
| 2059 | 2L-8 | Spring washer | 2 |
| 2060 | HW0414027-2 | M base | 1 |
| 2061 | HW9482404-A | Sheet | 3 |
| 2062 | HW9481967-B | Sheet | 6 |
| 1002 | HW1100160-1 | S head | 1 |

11.3 R-Axis Unit

Fig. 11-3: R-Axis Unit

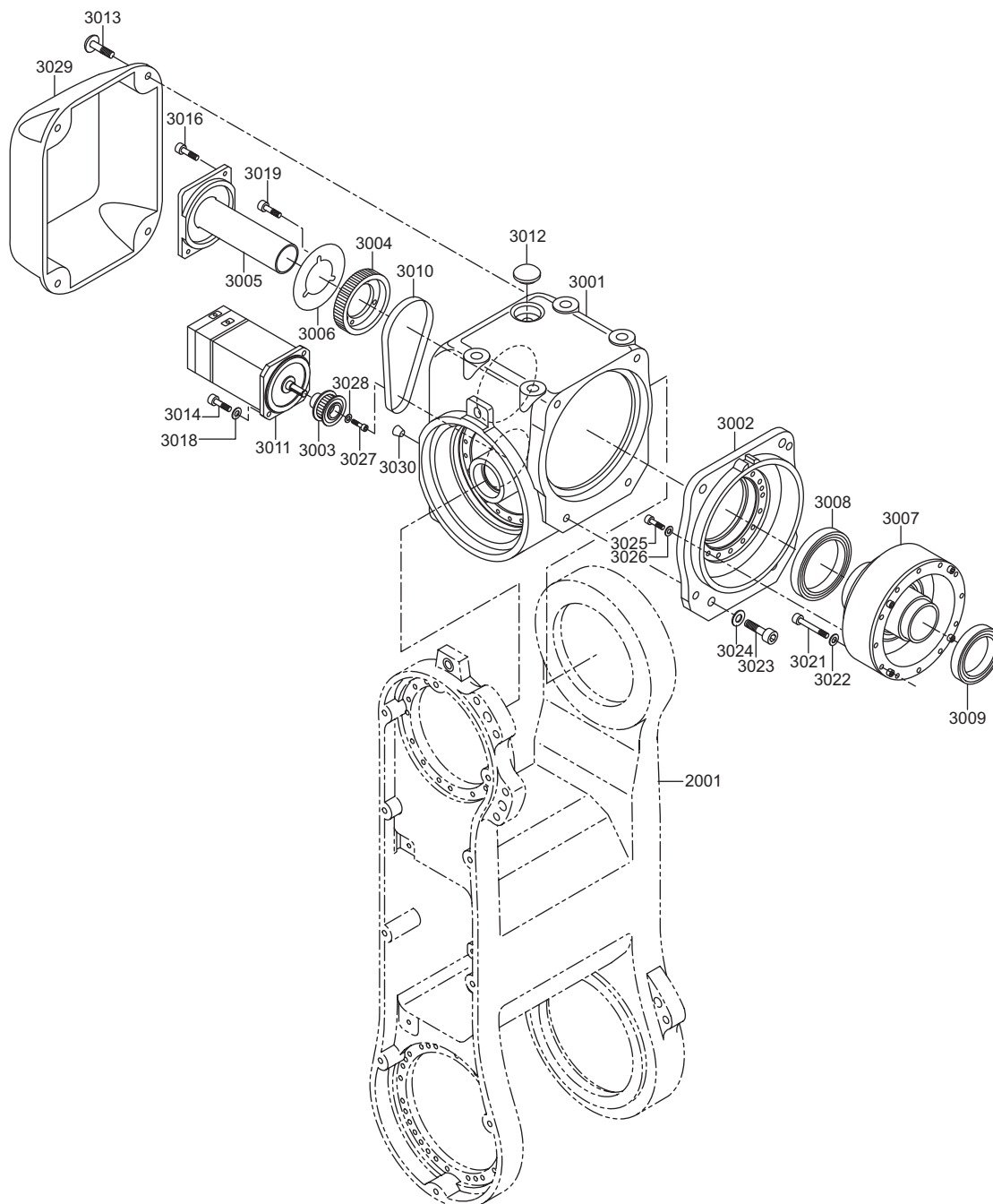


Table 11-3: R-Axis Unit

| No. | DWG No. | Name | Pcs |
|------|-------------|---------------|-----|
| 3001 | HW1100163-1 | Casing | 1 |
| 3002 | HW0314334-1 | Housing | 1 |
| 3003 | HW0414074-A | Pulley | 1 |
| 3004 | HW0483421-B | Pulley | 1 |
| 3005 | HW9406285-E | Pipe | 1 |
| 3006 | HW9406278-2 | Washer | 1 |
| 3007 | HW0388708-A | Speed reducer | 1 |
| 3008 | 6808ZZ*NS7* | Bearing | 1 |

11.3 R-Axis Unit

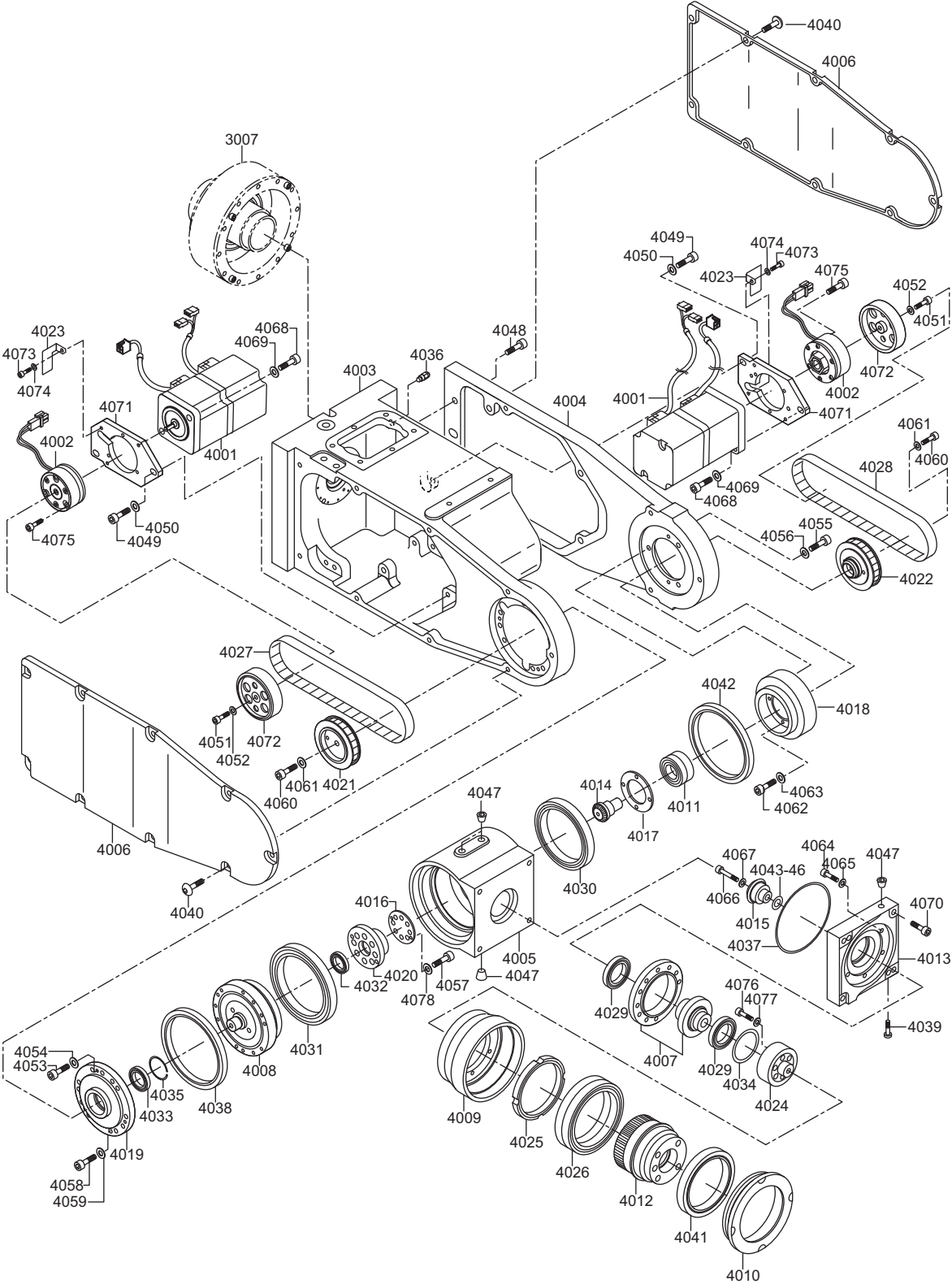
Table 11-3: R-Axis Unit

| No. | DWG No. | Name | Pcs |
|------|------------------|-------------------------------------|-----|
| 3009 | 6806ZZ | Bearing | 1 |
| 3010 | 060S3M219 | Belt | 1 |
| 3011 | SGMAV-A5ANA-YR11 | Motor | 1 |
| 3012 | OB-31 | Plug | 1 |
| 3013 | M4X10 | Hexagon socket button head screw | 4 |
| 3014 | M3X12 | GT-SA bolt | 2 |
| 3016 | M3X12 | GT-SA bolt | 2 |
| 3018 | M3 | Washer | 2 |
| 3019 | M3X10 | GT-SA bolt | 3 |
| 3021 | M3X30 | Hexagon socket head cap screw | 12 |
| 3022 | CDW-L3 | Spring washer | 12 |
| 3023 | M6X16 | Hexagon socket head cap screw | 4 |
| 3024 | 2L-6 | Spring washer | 4 |
| 3025 | M3X20 | Hexagon socket head cap screw | 16 |
| 3026 | CDW-L3 | Spring washer | 16 |
| 3027 | M3X12 | Hexagon socket head cap screw | 1 |
| 3028 | CDW-L3 | Spring washer | 1 |
| 3029 | HW1200150-1 | Cover | 1 |
| 3030 | LP-M5 | Plug | 1 |
| 2001 | HW1100161-1 | L arm | 1 |

11.4 Wrist Unit

11.4 Wrist Unit

Fig. 11-4: Wrist Unit



11.4 Wrist Unit

Table 11-4: Wrist Unit (Sheet 1 of 2)

| No. | DWG No. | Name | Pcs |
|------|------------------------|-------------------------------------|-----|
| 4001 | SGMAV-A5ANA-YR23 | Motor | 2 |
| 4002 | HW1470525-A | Break | 2 |
| 4003 | HW1100164-1 | U-arm 1 | 1 |
| 4004 | HW1300209-3 | U-arm 2 | 1 |
| 4005 | HW1300210-2 | Wrist base | 1 |
| 4006 | HW1300211-3 | Cover | 2 |
| 4007 | HW0388710-A | Speed reducer | 1 |
| 4008 | HW1380238-A | Speed reducer | 1 |
| 4009 | HW0414026-1 | Housing | 1 |
| 4010 | HW0414028-1 | B nut | 1 |
| 4011 | HW0481908-A | Bearing | 1 |
| 4012 | HW1300206-2 | Flange | 1 |
| 4013 | HW1300207-1 | Housing | 1 |
| 4014 | HW1380198-A | Gear | 1 |
| 4015 | HW1380199-A | Gear | 1 |
| 4016 | HW1400299-1 | Housing | 1 |
| 4017 | HW1400300-1 | B holder | 1 |
| 4018 | HW1400301-1 | Flange | 1 |
| 4019 | HW1400304-1 | Housing | 1 |
| 4020 | HW1400423-1 | Housing | 1 |
| 4021 | HW1400570-A | Pulley | 1 |
| 4022 | HW1400571-A | Pulley | 1 |
| 4023 | HW1400918-1 | Cover | 2 |
| 4024 | HW9406260-1 | Housing | 1 |
| 4025 | HW9406266-1 | B nut | 1 |
| 4026 | HW9480739-B | Bearing | 1 |
| 4027 | 060S3M396 | Belt | 1 |
| 4028 | 060S3M396 | Belt | 1 |
| 4029 | 6803ZZ*NS7* | Bearing | 2 |
| 4030 | 6808ZZ*NS7* | Bearing | 1 |
| 4031 | 6810VV*NS7* | Bearing | 1 |
| 4032 | 686 | Bearing | 1 |
| 4033 | 699ZZ | Bearing | 1 |
| 4034 | IRTW-26 | Retaining rings | 1 |
| 4035 | RTW-20 | Retaining rings | 1 |
| 4036 | MSTM6-10 | Pin | 1 |
| 4037 | S56 | O ring | 1 |
| 4038 | TC56665 (BE4772-E00X9) | Oil seal | 1 |
| 4039 | CBSTS6-6 | Hexagon socket head cap screw | 3 |
| 4040 | M4X10 | Hexagon socket button head screw | 18 |
| 4041 | AB2551E0 | Oil seal | 1 |
| 4042 | TC52647 | Oil seal | 1 |
| 4043 | SPS-010005 | Shim | 1 |
| 4044 | SP-009010 | Shim | 1 |
| 4045 | SP-009015 | Shim | 1 |
| 4046 | SP-009020 | Shim | 1 |

11.4 Wrist Unit

Table 11-4: Wrist Unit (Sheet 2 of 2)

| No. | DWG No. | Name | Pcs |
|------|-------------|-------------------------------|-----|
| 4047 | LP-M5 | Plug | 3 |
| 4048 | M4X16 | GT-SA bolt | 6 |
| 4049 | M4X16 | GT-SA bolt | 4 |
| 4050 | M4 | Washer | 4 |
| 4051 | M3X30 | Hexagon socket head cap screw | 2 |
| 4052 | CDW-L3 | Spring washer | 2 |
| 4053 | M3X8 | Hexagon socket head cap screw | 3 |
| 4054 | CDW-L3 | Spring washer | 3 |
| 4055 | M3X8 | Hexagon socket head cap screw | 3 |
| 4056 | CDW-L3 | Spring washer | 3 |
| 4057 | M4X12 | Hexagon socket head cap screw | 8 |
| 4058 | M3X12 | Hexagon socket head cap screw | 9 |
| 4059 | CDW-L3 | Spring washer | 9 |
| 4060 | M4X12 | Hexagon socket head cap screw | 2 |
| 4061 | 2L-4 | Spring washer | 2 |
| 4062 | M3X8 | Hexagon socket head cap screw | 4 |
| 4063 | CDW-L3 | Spring washer | 4 |
| 4064 | M3X12 | Hexagon socket head cap screw | 6 |
| 4065 | CDW-L3 | Spring washer | 6 |
| 4066 | M4X25 | Hexagon socket head cap screw | 1 |
| 4067 | 2L-4 | Spring washer | 1 |
| 4068 | M3X10 | GT-SA bolt | 4 |
| 4069 | M3 | Washer | 4 |
| 4070 | M4X10 | GT-SA bolt | 4 |
| 4071 | HW1401215-1 | M base | 2 |
| 4072 | HW1401268-1 | Pulley | 2 |
| 4073 | M3X10 | Hexagon socket head cap screw | 2 |
| 4074 | CDW-L3 | Spring washer | 2 |
| 4075 | M3X16 | Hexagon socket head cap screw | 6 |
| 4076 | M4X12 | Hexagon socket head cap screw | 6 |
| 4077 | 2L-4 | Spring washer | 6 |
| 4078 | CDW4L | Spring washer | 8 |
| 3007 | HW0388708-A | Speed reducer | 1 |

MOTOMAN-MH5S/MH5F

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for ongoing product modifications and improvements.