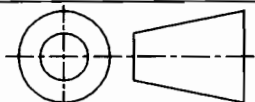




| | | | |
|---|---|------------------|---------------|
| 1 | 2 | 3 | 4 |
| | | REVN. | NO. OF PLACES |
| | | CHANGE/ECN NO. | |
| | | SIGNATURE & DATE | |
| | | REVISED | APPROVED |

NOTE:-
 THIS PART IS SAME AS PISTON RING ASSY. 6211312033.
 IT CONSISTS OF 03 PARTS.

| SL. NO. | PART NO. | DESCRIPTION |
|---------|------------|-------------|
| 01 | 41Z3180185 | RING TOP |
| 02 | 41Z3180711 | RING SECOND |
| 03 | 41Z3180703 | RING OIL |

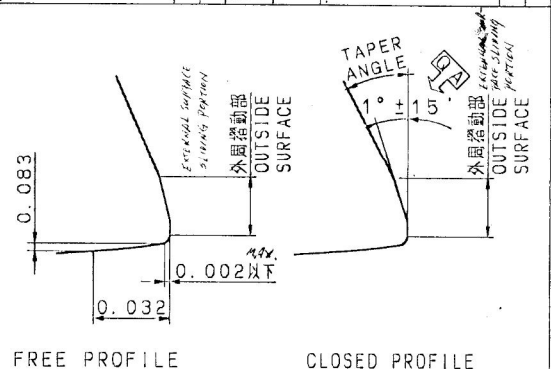
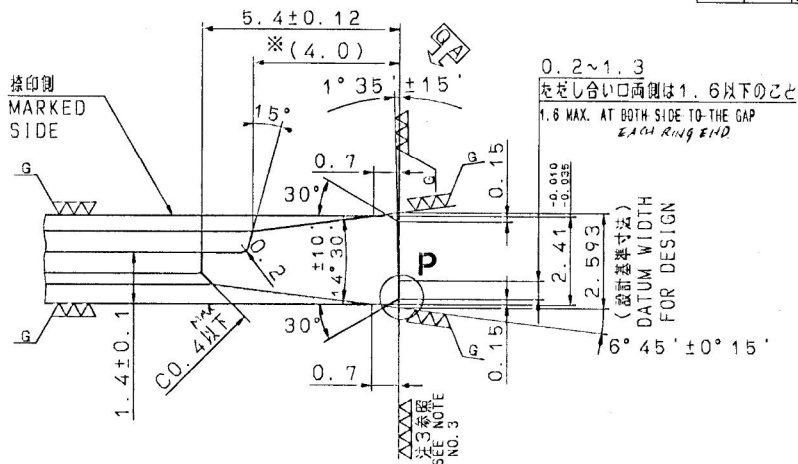
| | | | | | | | | | |
|--|----------|--------------|---|----------|---|-------------|--|-----|--|
| SL. NO. | PART NO. | NAME OF PART | QTY./ ASSLY. | MATERIAL | REMARKS | APPLICATION | QTY. | | |
| General Tolerance To SKES-04-052-0 Remove all burrs and break sharp edges. Unspecified finish | | | | | | | | | |
| All dimensions are in mm, Unless specified. Do not scale the drawing. If in doubt, ask. | | | MATERIAL | | HEAT TREATMENT | | | | |
| | | | --- | | --- | | | | |
| | | | Wt. of part (Kgs.) | | PORTION | | CASE DEPTH | | |
| DESIGN REF. --- | | | --- | | --- | | --- | | |
| | | | --- | | --- | | --- | | |
| TITLE | | | PISTON RING ASSY. | | | | | | |
| SIGNATURE | | | DATE | | SURF. TREATMENT | | | --- | |
| APPROVED | | | 30/6/2020 | |  | | | | |
| REVIEWED/CHECKED | | | 30/6/2020 | | | | | | |
| DESIGNED/DRAWN | | | 30.6.2020 | | | | | | |
| | | |  | | BEML LIMITED, Engine Division, Mysore. | | SHEET 1 1 | | |
| | | | | | DRG.NO. | | 41Z 310 0853  | | |


| | | | | | | | | | |
|----------|----------|----------------------|--------------|----|--|--|--|--|--|
| REVISION | 65-3-22 | 本圖ハSCA ED140 用ニテ発行スル | | | | | | | |
| △・2 | 85-11-21 | 重宝出図(表紙6311-1693) | 加 藤 29 | △× | | | | | |
| △・ | | | 加 藤 29 | △× | | | | | |

[illegible]

| | | | |
|--------------|---|----------|------|
| 6211-31-2222 | △ | CODE NO. | A5D2 |
|--------------|---|----------|------|

92. 5.13 作図
第二冊 (BEIL) の 9 頁



P (NONE) 

A — A (10:1)
装着状態を示す
CLOSED CONDITION

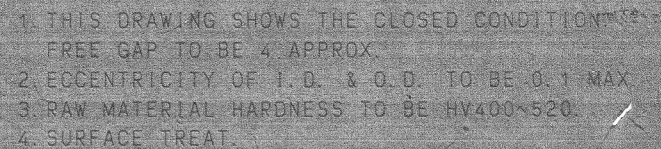
1. 本部品は第2圧力リングにのみ使用のこと。
2. 本図は装着状態を示す。自由時の合口隙間は約19.7
3. 外周は厚さ0.10~0.25の硬質クロムメッキ後
液体ホーニング仕上を行い、さらに外周当り確認ラップのこと。
4. 素地硬さ HRC25~38
5. 外周以外はパーカライジング処理のこと。
6. 内外径の偏心は0.1以下のこと。
7. 合口における接線張力は1.65~2.47kgのこと。
8. 材質はES1119 KPR3(リケン規格RIK24相当)のこと。
9. 1個のリングにおける各部の硬さの差はHRCの値で4以内のこと。
10. ピストンリングの品質はKES.06.163.23のBによる。
11. キーストン下り量:0~0.1
12. ネジレ量:20'~50'(合口反対側)
※印寸法にて調整のこと。
13. 二軸差:-0.2~+0.3

1. THIS PART TO BE USED FOR THE SECOND COMPRESSION RING. ONLY.
2. THIS DRAWING SHOWS THE CLOSED CONDITION.
FREE GAP TO BE 19.7 APPROX.
3. OUTSIDE SURFACE TO BE CHROMIUM-PLATED WITH THICKNESS OF
0.10~0.25. FINISHED BY WET HONING,
AND LAPPED TO CONTACT WIDTH.
4. RAW MATERIAL HARDNESS TO BE HRC25~38.
5. APPLY PARKERIZING TREATMENT, EXCEPT OUTSIDE SURFACE.
6. ECCENTRICITY OF I. D. & O. D. TO BE 0.1 MAX.
7. TANGENTIAL LOAD REQUIRED TO CLOSE TO SPECIFIED GAP
TO BE 1.65~2.47kg.
8. MATERIAL TO BE ES1119 KPR3.
(RIK24 BY RIKEN CO. OR EQUIVALENT)
9. DISPERSION OF RAW HARDNESS IN ONE RING TO BE HRC4. MAX.
10. QUALITY OF PISTON RING TO CONFORM TO B OF KES06.163.23.
11. SUNKEN AMOUNT OF KEYSTONE TO BE 0~0.1.
12. TWIST ANGLE TO BE 20'~50'. (AT OPPOSITE SIDE TO THE GAP)
ADJUSTED BY ※ MARKED DIMENSION.
13. CIRCULARITY TO BE -0.2~+0.3



| | | | | | | | | | |
|--------------|--|-----------|--|----------------|--|------------|--|---------------|--|
| SYM. | | PART NAME | | MATERIAL | | QUANTITY | | REMARKS | |
| | | | | | | | | | |
| 3RD ANGLE P. | | MASS (KG) | | HEAT TREATMENT | | CASE DEPTH | | MATERIAL | |
| 0.036 | | | | | | | | SEE DRWG. | |
| ESTIMED | | CHECKED | | DRAWN | | DATE | | PART NAME | |
| #1 | | #1 | | | | 91. 6.19 | | RING | |
| SIMILAR | | APPROVAL | | SCALE | | SIZE | | PART NO. | |
| | | | | 1:1 | | 2 | | -6211-31-2222 | |

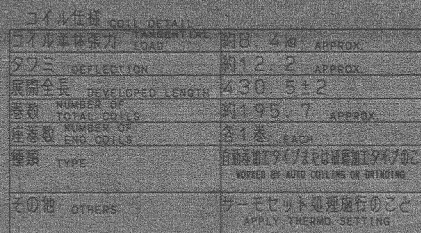
8
A-1112 ORIGINAL KOMATSU LTD. (A)4-6898 885-3262-598
(A)4-6908 Re: 163



a) OUTSIDE SURFACE: CHROMIUM PLATED WITH THICKNESS
0.10~0.20, FINISHED BY WET HONING, AND ULTRA SUPER
LAPPED TO CONTACT WIDTH.
b) INNER SURF AND COIL GROOVE: CHROMIUM PLATED WITH
THICKNESS 0.005~0.025.
c) OTHERS: APPLY PARKERIZING TREATMENT.

CHROMIUM PLATED WITH THICKNESS 0.005 MIN

6. QUALITY OF PISTON RING TO CONFORM TO B OF KES06.163.23.



IMPORTANT PART

| | | | | | |
|-----|-----------|----------|-----|--------|---------|
| 03 | JOINT | SUS304 | 1 | 0.000 | 0X40 |
| 02 | COIL | SUS304 | 1 | 0.000 | |
| 01 | PING | 5X5 | 1 | 0.000 | |
| SYM | PART NAME | MATERIAL | QTY | WEIGHT | REMARKS |

[illegible]