

**HSP**

**Hitz**

## Information of Engine Parts

Ref. No. : HSP-B1904E Date of Issue : June 2019

**Engine Type : 50~90MC / MC-C / ME-C / ME-B**

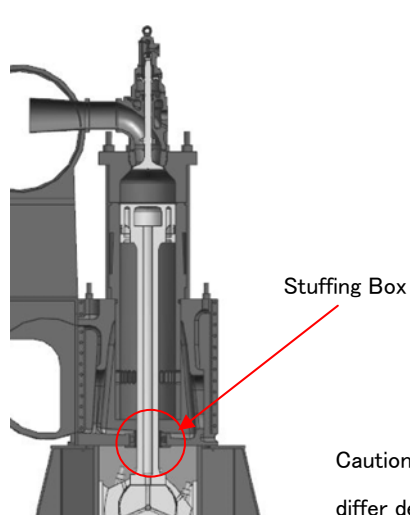
### Rings for Piston rod Stuffing box

We have adopted the rings (Hitz type) designed by our company for Piston rod Stuffing box of conventional main engines. On the other hand, with the recent trend of increase in power (effective pressure) and change in piston rod movement of the main engine, design improvement was done for HECO type rings adopted by licenser MAN ES. Since we have confirmed that HECO type has equivalent performance as Hitz type, we have adopted HECO type for recent main engines. From such background and the viewpoint of spare parts stock unification, we have decided to supply HECO type, after Hitz type stock ends.

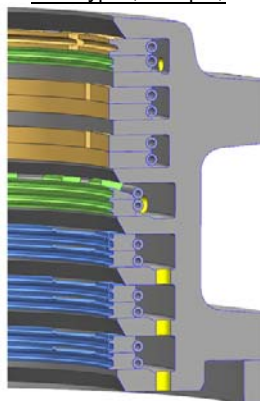
The casing is compatible between Hitz type and HECO type. For ordering parts of HECO type rings, please use the attached REPAIR KIT sheet.

Meanwhile, it is recommended to replace the rings by one complete set basis, so that any trouble possibilities caused by the combined use of the Hitz type and the HECO type rings in the same cylinder can be avoided.

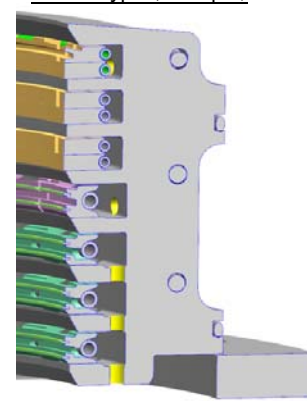
In addition, you can refer to the attached instructions (Checking, Overhaul) for the ring clearance and coil spring length reference value during maintenance when replacing with HECO type, and the correct assembly position of sealing ring and scraper ring.



Hitz type (example)



HECO type (example)



Caution: The these drawings are for reference purpose only and the actual configuration may differ depending on main engine types.

For more information or purchase order, please contact our representative or following our sales office.

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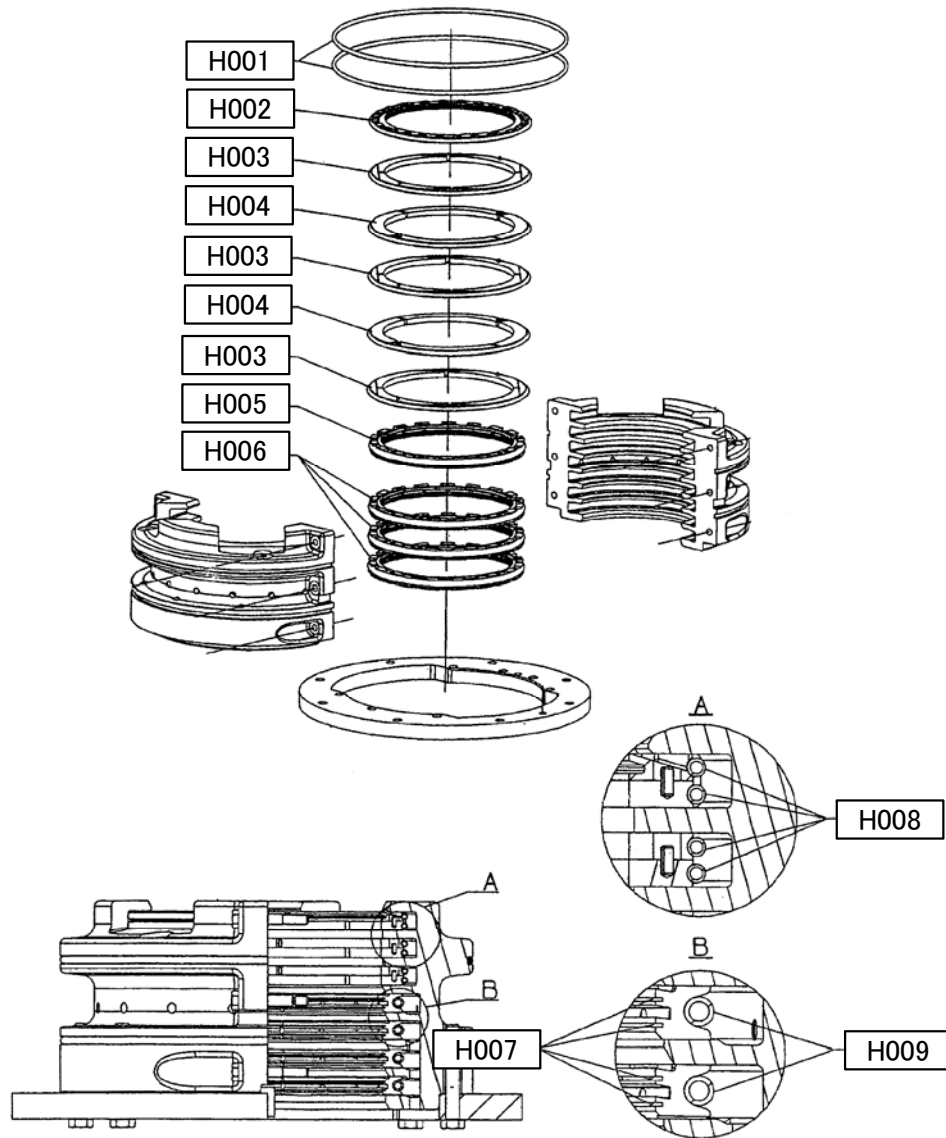
For technical queries, please also contact:

Service department	TEL +81-6-6569-0508	E-mail de-support@hitachizosen.co.jp
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# REPAIR KIT

## Stuffing Box (HECO type)

Ship Name		Required Quantity
Engine Type		<input type="text"/> Sets
Engine No.		



「KIT」での注文以外は、下記のRequired Q'ty欄に個々の数量を記入してください。  
 If you need any psrts instead of KIT unit, please fill in the necessary Q'ty in the  
 "Required Q'ty" columns.

No.	Item No.	Description	Q'ty/cyl.	Required Q'ty	Remarks
Plate No. 90205-H001					
1	H001	O-ring	2		
2	H002	Top scraper ring	1		
3	H003	Pack sealing ring	3		
4	H004	Cover sealing ring	2		
5	H005	Scraper ring	1		
6	H006	Scraper ring	3		
7	H007	Lamella, for H005 and H006	8		
8	H008	Spring, for H002, H003 and H004	6		
9	H009	Spring, for H005 and H006	4		

## PISTON ROD STUFFING BOX/ピストン棒スタフingボックス Checking/点検

1. After the piston rod stuffing box has been dismantled, check the following clearances:.  
See Procedure 902-2.2.

### Upper most scraper ring and sealing rings

Clearance at ring ends (scraper ring).  
Total clearance (scraper ring) (4 x 6 mm)  
Clearance at ring ends (sealing rings)  
Total clearance (sealing rings) (4 x 6 mm)

### Lowermost scraper

Clearance at ring ends.  
Total clearance : (3 x 3 mm)

The ring clearances stated in Data apply to new rings.

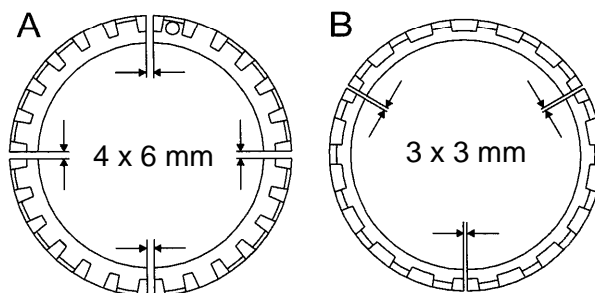
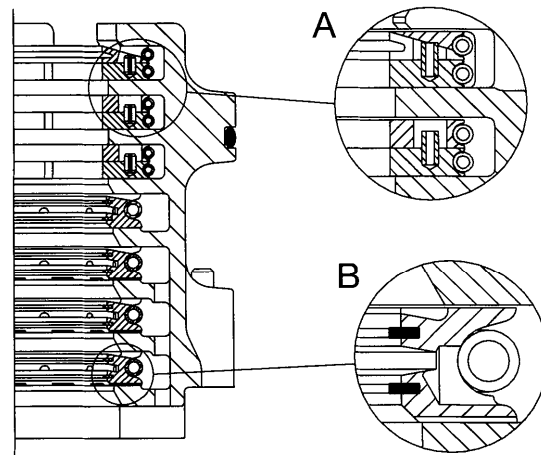
As a general guide, it is recommended – depending on the overhauling intervals and one's own experience – to replace sealing rings and scraper rings when the specified clearance values “4 x 6 mm” and “3 x 3 mm” have been halved.

2. Garter springs:

Generally, it is recommended to renew the springs when the sealing rings and scraper rings are renewed.

The springs can be checked as follows:  
Place the springs on the table, measure Lo (free length), and compare with Data. If a spring is extended more than 8% from the value given in data, it must be discarded.

②



1. ピストン棒スタフingボックスを取り外し後、下記の隙間を点検する。  
902-2.2 参照

### 上部スクレーパリングおよび気密リング

合い口隙間 (スクレーパリング)  
合い口隙間合計 (スクレーパリング) (4 x 6 mm)  
合い口隙間 (気密リング)  
合い口隙間合計 (気密リング) (4 x 6 mm)

### 最下段のスクレーパリング

合い口隙間  
合い口隙間合計 : (3 x 3 mm)

Data に記載の隙間は新品のリングの値

スタフingボックスの開放間隔およびそれぞれのサービス経験にも依るが、一般的な指針として“4 x 6 mm” および “3 x 3 mm” の隙間が半分以下になれば、新品と取り替えることを推奨する。

2. コイルばね :

一般的に、気密リングおよびスクレーパリングを新替えしたときは、ばねも新替えることを推奨する。

ばねは以下のように点検する。:  
ばねをテーブルの上に置き、Lo (自由長さ) を計測して Data と比較する。ばねが Data の値より 8%以上伸びていれば、そのばねは廃却する。

②

Engine bore size 主機関ボアサイズ	Data Free length 自由長さ (Lo)	
	Spring (Sealing ring) ばね (気密リング)	Spring (Scraper ring) ばね (スクレーパリング)
	mm	mm
46	596	453
50	639	496
60	618	606
65	786	706
70	761	719
80	853	782
90	889	839

Spring (Sealing ring) ばね (気密リング)



Spring (Scraper ring) ばね (スクレーパリング)



# PISTON ROD STUFFING BOX/ピストン棒スタフティングボックス Overhaul/分解

10. Lubricate the piston rod (in the area where all the ring units in the stuffing box will be positioned) with molybdenum disulphide ( $\text{MoS}_2$ ).

For correct mounting of the sealing and scraper rings see the sketch. The scraper ring in groove no. 4 must be without relief grooves on the underside.

10. ピストン棒（スタフティングボックスリングを組み付ける範囲）に二硫化モリブデン（ $\text{MoS}_2$ ）を塗る。

気密リングとスクレーパリングの正しい組立てはスケッチ参照。4段目のスクレーパリングは下面に逃し溝のないものであること。

⑩

