

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## 5<sup>th</sup> wheel

## KH, KS, KD

### The full range of FKH 5<sup>th</sup> wheels



Other FKH 5<sup>th</sup> wheel IM&S Bulletins: **KPM-001-0915** is for the **KC..C**  
**KPM-007-0310** is for the **KA..A, KA..C, KA..D**  
**KPM-001-0720** is for the **KS16E**  
**KPA-001-0312** is for foot attachment KD & KS

MODEL SERIES	MODEL NAME	KING PIN SIZE (mm)	D-RATING (kN)	JAW DESIGN	TOP PLATE LUB	TOP PLATE SIZE	CRN
<b>KA..A</b>	Highway Master	50	174	1-piece	Grease-less Grease-able	Standard	32015
<b>KA..C</b>	Fleet Master	50	195	1-piece	Grease-less Grease-able	Standard Wide	27120
<b>KA..D</b>	Fleet Master	90	240	1-piece	Grease-less Grease-able	Standard Wide	30639
<b>KC..C</b>	Fleet Master Cast	50	200	1-piece	Grease-able	Standard	47568
<b>KH</b>	Road Boss	90	260	2-piece	Grease-able	Standard Wide	29119
<b>KS</b>	Komodo40	90	360	2-piece	Grease-able	Wide	29119
<b>KD</b>	Komodo50	90	360	2-piece	Grease-able	Wide	N/A

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## **INSTALLATION**

Choosing the correct 5<sup>th</sup> wheel and/or 5<sup>th</sup> wheel assembly for a given application is the responsibility of the purchaser.

The Installation shall be strictly in accordance to AS 4968 1, 2&3, 2003, VSB6-Section P and any other statutory requirements by regulatory authorities.

The 5<sup>th</sup> wheels and 5<sup>th</sup> wheel assemblies are supplied with sufficient lubrication for assembly and storage prior to Delivery and installation.

It is essential to fully lubricate all grease points after the installation is completed, before the vehicle goes in to service.

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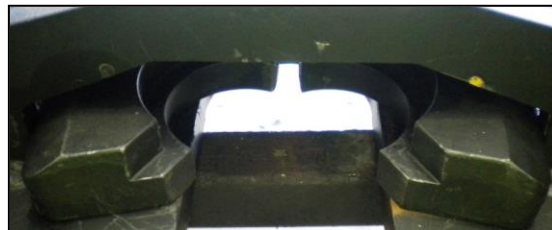
## **OPERATING THE 2-PIECE JAW DESIGN 5<sup>th</sup> WHEEL**

**Pre-Coupling Procedure** (This procedure must be repeated after jaw replacement.)

Before initial/1st coupling the jaws and locking mechanism must be set in the "cocked" position.



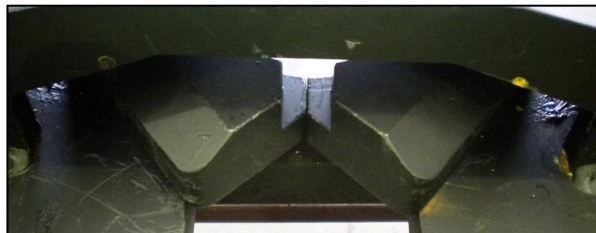
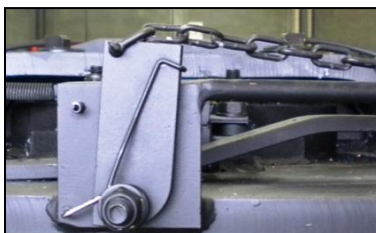
1. Unlock the jaw set by pulling on the slide section of the handle to release the safety catch.
2. While holding the slide handle fully out, pull forward on the handle to draw the slide block outwards releasing the jaws.
3. Hold the handle in the fully forward position and use a tire bar to move the jaws to the fully open position.
4. Slowly release the handle until the slide block holds the jaws in the open or "cocked" position.



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## Coupling

- 1 Reverse prime mover to the front of the trailer, aligning turntable throat with king pin - stop the vehicle.  
Connect air and electrics; ensure top plate (turntable) is on a similar level to the skid plate (Trailer). **(Do not allow greaseless turntable to lift the trailer. Damage to inserts may result.)**
- 2 Apply trailer brakes and reverse under the trailer until the jaws engage the king pin and "fires" the mechanism.
- 3 Visually check the skid plate is flat against the turntable top plate, the bottom flange of the king pin is visible below the jaws and that the wedge block is in position.
- 4 Visually check the handle is in the fully returned position, the slide block rod is no longer visible and the safety lever is in the vertical position and covering the slide block rod.
- 5 Before moving off, with the trailer brakes applied, move the prime mover forward to test connection.



## De-Coupling

- 1 Ensure that the vehicle is on a level surface and landing gear is extended, disconnect air and electrics.
- 2 Pull slide handle outward and fully forward, gently allow the handle to return until the slide block engages the trigger.
- 3 Drive the prime mover forward.

Mechanism will remain "cocked" and jaws open, ready for next coupling.



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## **MAINTENANCE**

**Note:** There are no jaw adjustments for this 5<sup>th</sup> wheel design.

### **Daily**

Grease all lubrication points with a quality Lubricant (Castrol Ultratak Grease 2, LE Almatek, Morey's Bigfoot EP2 Grease or equivalent) ensuring new grease purges the old grease.  
Apply grease to slide block, throat and bore of jaws.  
Visually inspect for loose or damaged lubrication lines and worn or damaged parts.  
Check welds and pivot feet for evidence of fatigue.

### **Weekly**

De-couple combination and complete normal daily procedure.  
Check top plate for grit or contaminants and clean if necessary.  
Apply a liberal coating of grease to the top plate. (Delete this step if Greaseless)  
Check jaws for evidence of wear or impact damage.  
Check slide block for correct operation and excessive wear.  
Check operating handle and safety latch for correct operation.  
Close jaws and check bore for damage, out of round or over sizing.  
Using a pry bar, check for vertical or horizontal movement within the foot pivot area.  
Visually inspect for loose Pivot pin locking Nut or Bolts.

### **Monthly**

De-couple combination and pressure clean all visible grease from the turntable.  
Inspect all components for damage or wear.  
Inspect welds to bridge, bridge support member and upper and lower foot for evidence of fatigue.  
Inspect top plate, de-burr and dress off and excessive score marks or metal flow. (Delete for Greaseless)  
Use a straight edge to check top plate for deformities.  
Check the pivot pin locking Nut or Bolts for the correct torque.

**NOTE:** Replace parts which exceed the wear limits or show signs of impact damage.

Fitting a new 5<sup>th</sup> wheel and connecting it to a worn king pin and skid plate, may damage the new 5<sup>th</sup> wheel and cause functional problems.

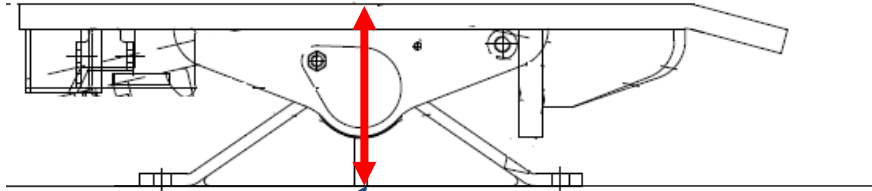
It is the responsibility of 5<sup>th</sup> wheel users and service personnel to inspect the 5<sup>th</sup> wheel to ensure that all parts remain operable and safe.  
This applies even if the wear limits have not been reached.

Please consider the application, km's travelled, the number of coupling and un-coupling operations and how these actions are performed by various operators.  
Consider any incidents (and accidents) which may have caused any excessive loads, impact damage and wear on the 5<sup>th</sup> wheel.

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## **JAW (only) REMOVAL AND REPLACEMENT**

1. Before removing the top assembly from the feet (by removing the foot pins), check the following:

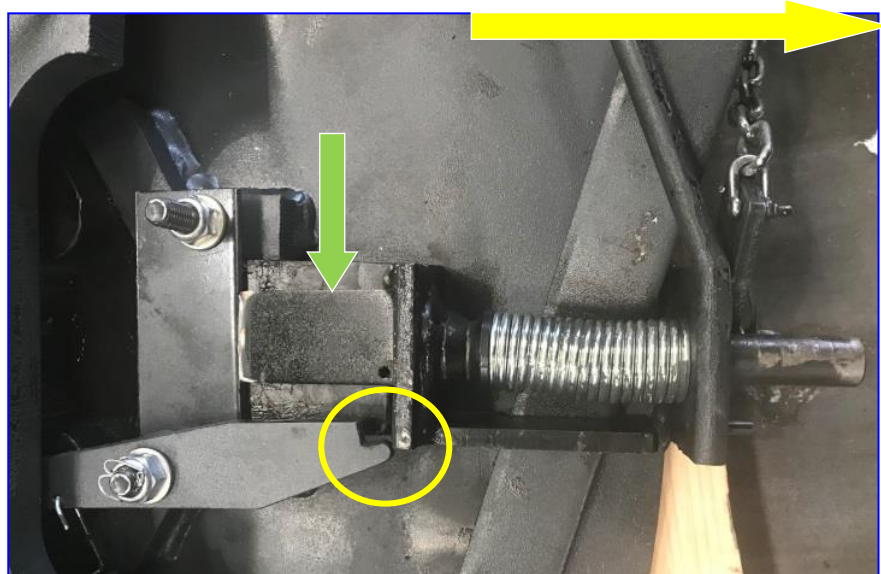


When the KH 5<sup>th</sup> wheel can be moved up and down, more the 4mm, you may replace the rubber or polyurethane bushes.  
 For the KS and the KD, take note of the movement and check the conditions of the bronze bushes.

2. After removing the top assembly, turn it upside down on to the work bench.

3. Push the release lever all the way to the front.

4. Insert a 50mm spacer block between the wedge and the wedge holding bracket. The trigger is now free.



5. Remove the trigger holding spring.

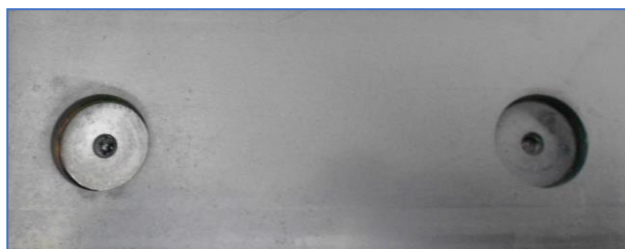


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6. Remove the lube fittings from the jaw pins.
7. Remove the circlips and the washers if there are any.

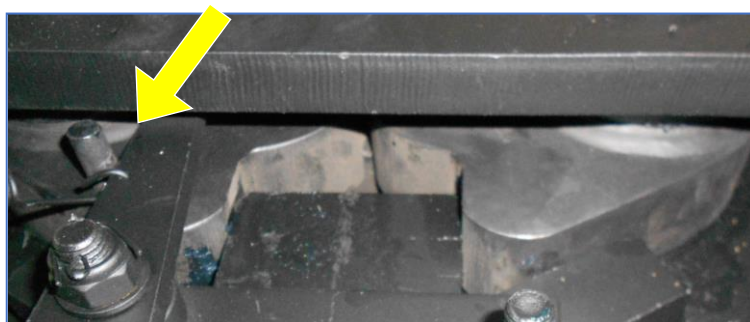


8. Push the jaw pins out of the top assembly, which will release the jaws and they can now be removed.

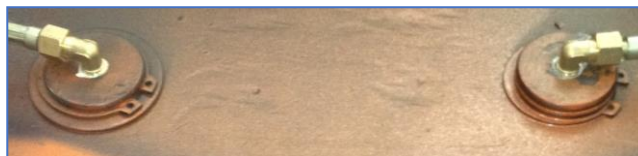


**Note:** Before installing a new set of jaws, check the wear limits on the jaw pins (6), the wedge (7) as well as the bores for the jaw pins (5) and food pins (4). See the **WEAR LIMITS** section for all the details.

9. Insert the new jaws in to the top assembly.  
**Note:** The jaw with the trigger pin must be on the trigger side. Make sure the trigger is on the inside of the pin!



10. Make sure the jaw pins are pushed all the way down and install the circlip in the lowest circlip groove possible. Add a spacer washer if necessary, under the circlip to eliminate the jaw pin is allowed to move upwards.



11. Refit lube lines to the jaw pins.
12. Reinstall the trigger spring and remove the 50mm spacer block, to release the wedge back against the jaws.
13. Use Bulletin **KPM-001-0615** to document and check everything is installed properly.
14. Reinstall the top assembly back on its feet (with new pins and bushes if required).

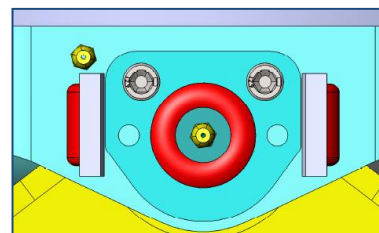
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For the **KH** model, the foot pin uses a locknut for locking in the foot pin to the main structure.

Torque Nut to **75-80Nm**.

For earlier models of the **KS** foot pin, torque the two cap screws to **130-135Nm**. Use fixing bolts to assist in removing the food pin.

The current **KS** has an additional foot pin retention plate. All the cap screws are to be torqued to **130-135Nm**.



15. Check that the jaws open and lock properly with a test king pin tool (N500114-001).



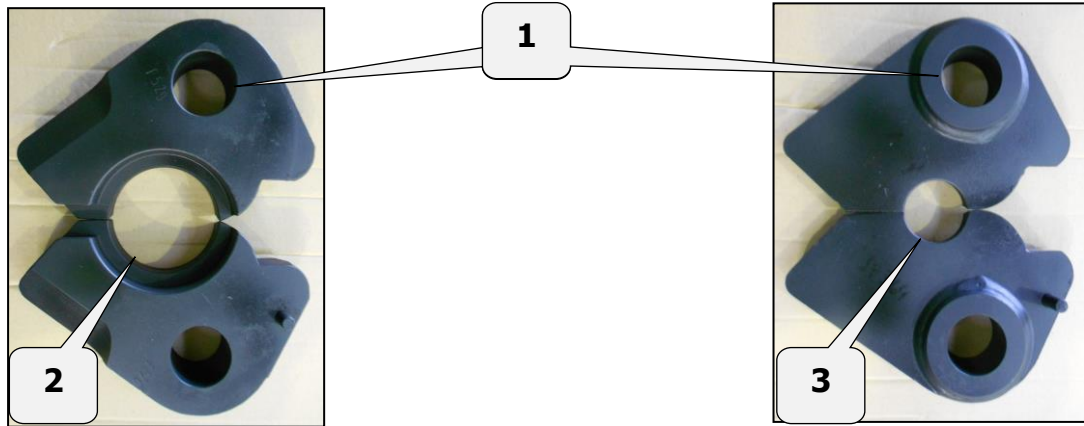
16. Lubricate all the grease points and make sure grease purges.



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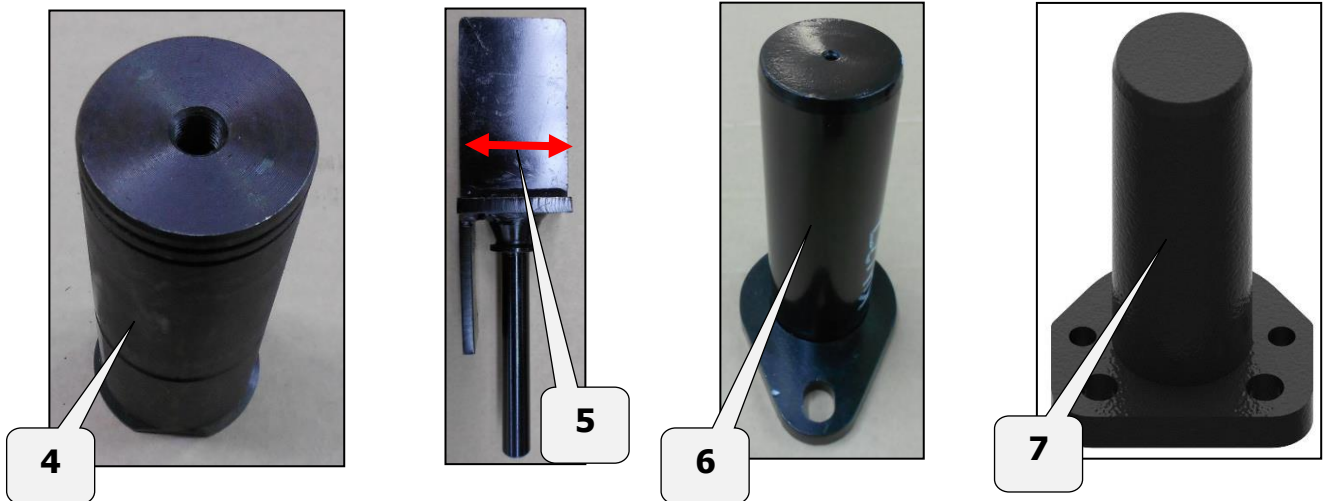
## WEAR LIMITS

The following components should be checked at regular intervals. If the wear limits are exceeded, you may replace the item, to keep the total endplay between the king pin and the 5<sup>th</sup> wheel to a minimum.



No	MODELS	DISCRIPTION	KINGPIN SIZE mm	NOMINAL DIMENSION mm	MAXIMIUM WEAR LIMIT mm
1	KH, KS, KD	Jaw pivot pin bore	50/90	Ø45.19	Ø45.69
2	KH, KS, KD	Jaw set king pin bore	90	Ø89.20	Ø92.20
3	KH	Jaw set king pin bore	50	Ø51.00	Ø53.00
2/3	75mm KH**	Jaw set king pin bore	75	Ø76.30	Ø78.50

\*\*Note: Before repairing a “75mm” 5<sup>th</sup> wheel, make sure that spare parts are available!

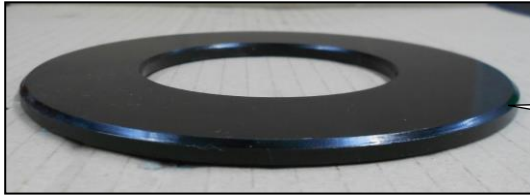


No	MODELS	DISCRIPTION	KINGPIN SIZE mm	NOMINAL DIMENSION mm	MAXIMIUM WEAR LIMIT mm
4	KH, KS, KD	Jaw pin diameter	50/90	Ø44.98	Ø44.48
5	KH, KS, KD	Slide block	50/90	76.20	75.20
6	KH	Foot pin diameter	90	Ø50.70	Ø50.20
7	KS	Foot pin diameter	90	Ø50.75	Ø50.25

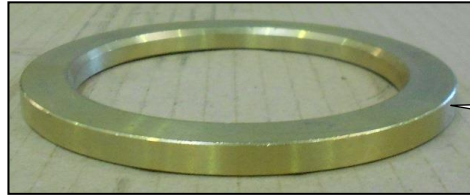


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**WEAR LIMITS** For the KD:



**10**



**11**



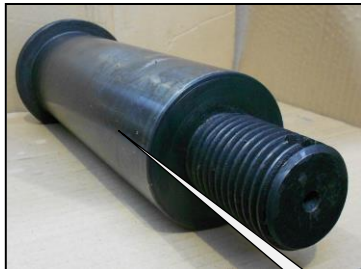
**12**



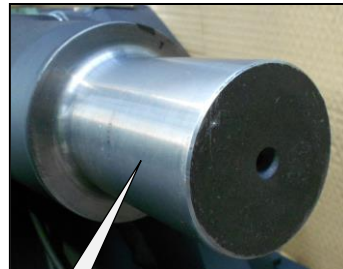
**13**



**14**



**15**

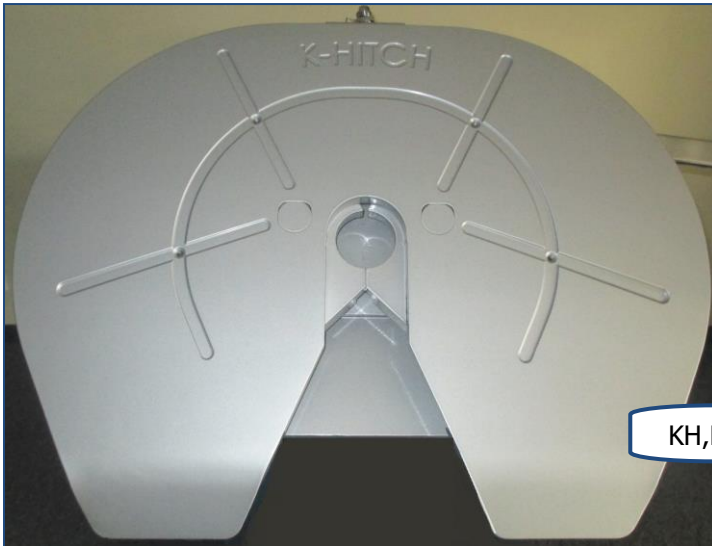


**16**

No	MODEL	DISCRIPTION	KINGPIN SIZE	NOMINAL DIMENSION mm	MAXIMUM WEAR LIMIT mm
10	KD	Trunnion thrust washer thickness	90	4.90	4.40
11	KD	Trunnion foot thrust thickness	90	6.90	6.15
12	KS	Foot bush bore	90	Ø51.40	Ø55.40
13	KD	Trunnion foot bush bore	90	Ø75.23	Ø77.23
14	KD	Trunnion pivot bush bore	90	Ø75.23	Ø77.23
15	KD	Trunnion pivot pin bore	90	Ø75.10	Ø75.60
16	KD	Trunnion foot end diameter	90	Ø75.00	Ø74.50

## INSTALLATION, MAINTENANCE & SERVICE BULLETIN

The maximum wear in the loading area (top plate) should not exceed the depth of the lubrication grooves.



KH,KS & KD: 3.0mm (flat groove)

**Note:**

For parts information go to: PARTS VIEW Bulletin **KPS-004-1012** for the **KH, KS, KD**

**Also check the wear on the kingpin!**