

# INSTALLATION, MAINTENANCE & SERVICE BULLETIN

## KINGPIN Bolt-in , Weld-in , Drop-in

### INSTALLATION

**For All:** Installation and Maintenance procedure shall be strictly in accordance to AS/NZS 4968. 1, 2 and 3 (2003), VSP6 Section P and other statutory requirements by regulatory authorities.

**Note:** All Welds shall be subject to process control. Preheat the welding areas to 200° to 300° Celsius. Use low Hydrogen Techniques and where necessary post weld treatment. Only qualified welders and trades people should perform the welding & assembly tasks.

### Bolt-in

Ensure retention plate corresponds with the skid plate thickness.  
This can be found on top of the retention plate. **KPF 08** Used with 8mm skid plate.  
**KPF 10** Used with 10mm skid plate.



Only use genuine retaining bolts.  
Install M14 Grade 10.9 and torque to **190 Nm** after the welds are cool.

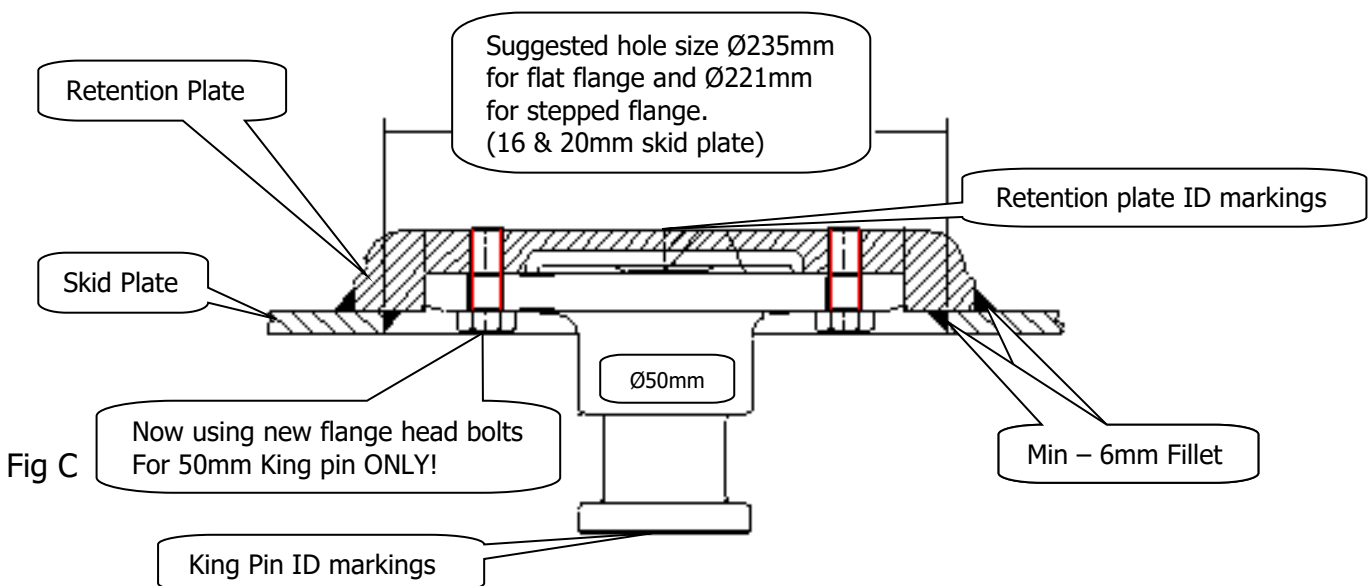
The 50mm king pin uses the **flange head bolt** (KPB14F/1) NO Loctite

The 90mm king pin use the **normal hex head bolt** (KPB14/1) c/w Loctite  
Do **NOT** use the flange head bolts on the 90mm king pin!!

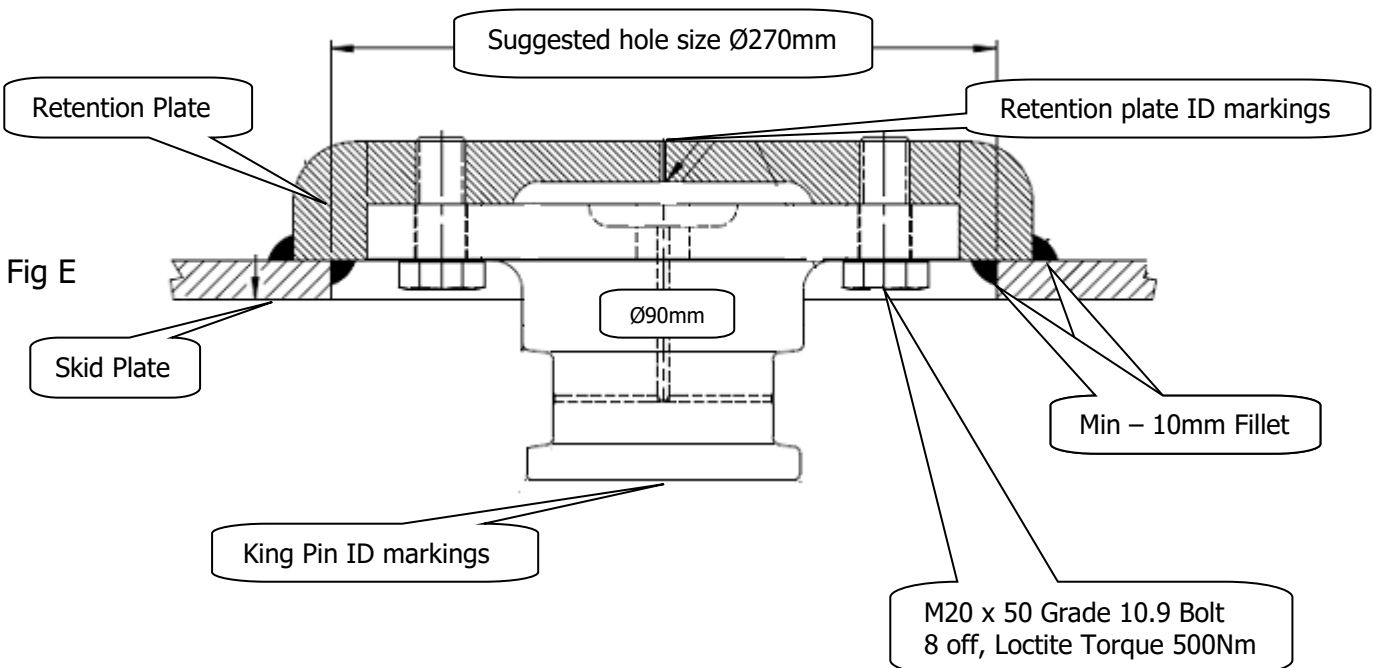
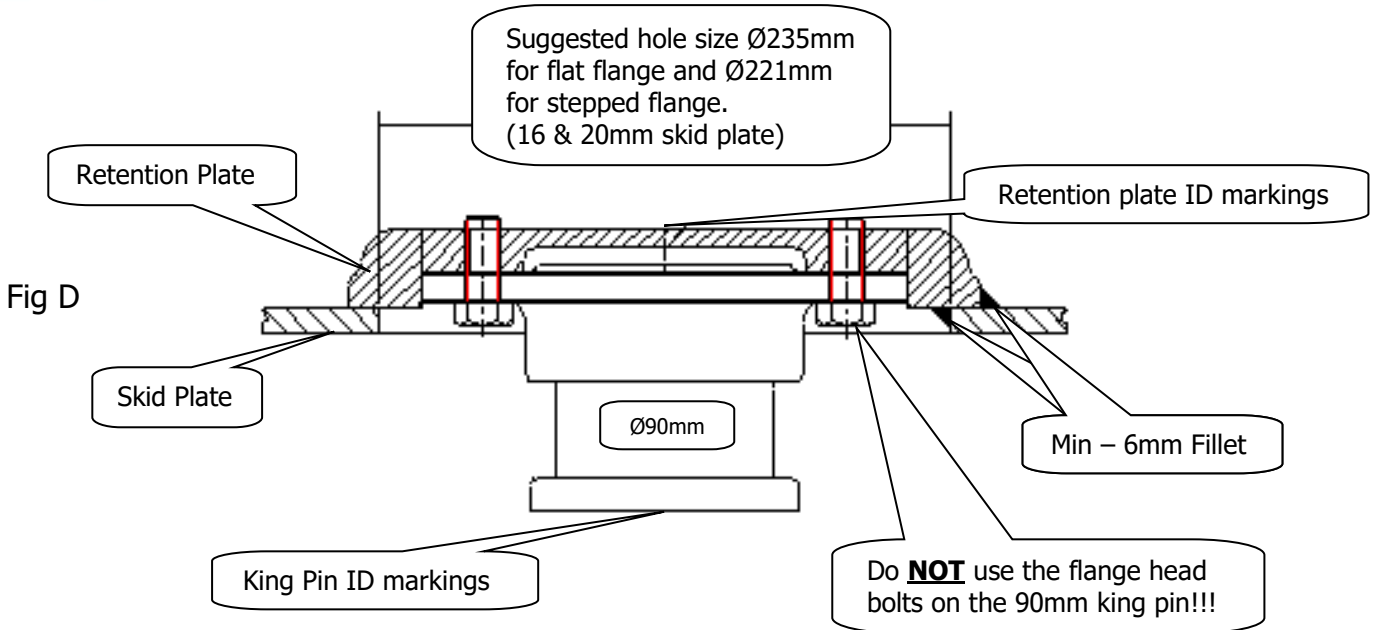
The HD 90mm king pin use M20 Grade 10.9 torque to **500 Nm** after the welds are cool c/w Loctite.



Weld to inside and outside of the retention plate and please refer to  
**Fig C** (Std 50mm), **D** (Std 90mm) & **E** (HD 90mm) for the details.



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## Weld-in

Ensure the Kingpin selection corresponds with the Skid plate thickness.

- KPW5010 and KPW9010      10mm skid plate
- KPW5012 and KPW9012      12mm skid plate

**For the 50mm Kingpin:** Minimum 6mm fillet weld to inside and outside of the king pin flange to the skid plate (Fig A).

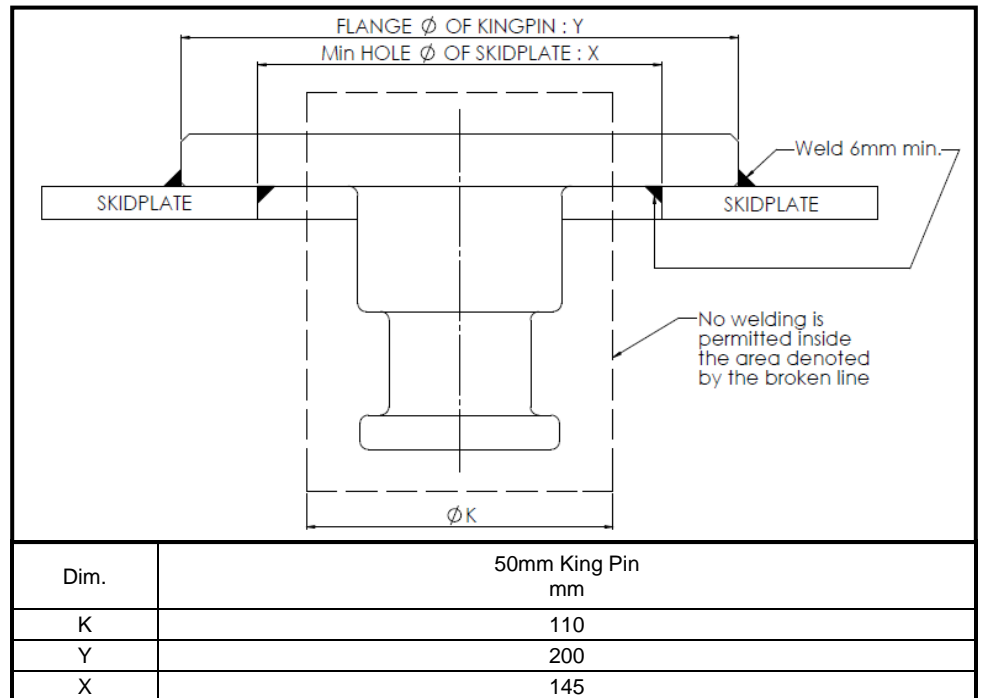


Fig A

**For the 90mm Kingpin:** Minimum 8mm fillet weld to the outside of the king pin flange to the skid plate (Fig B).

Additional gussets may need to be added to the back of the king pin flange and skid plate.

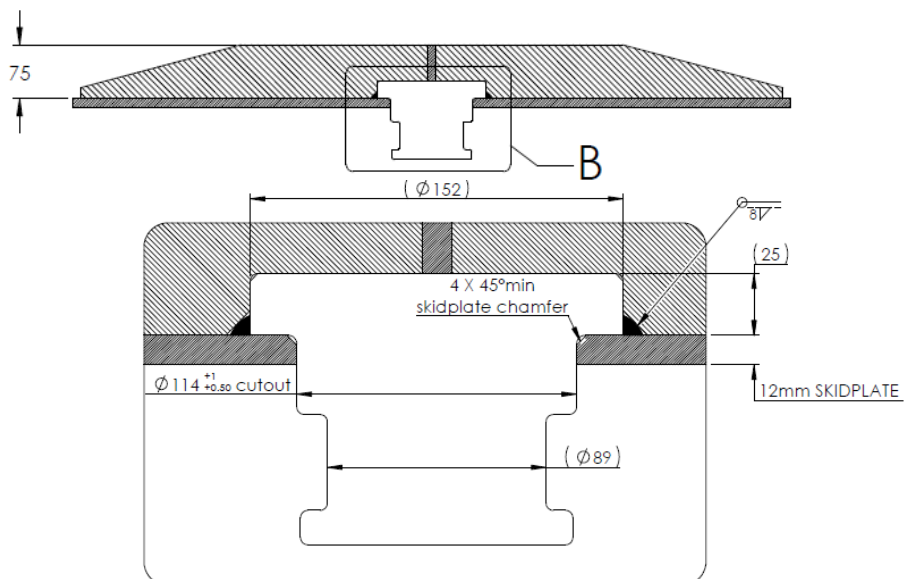
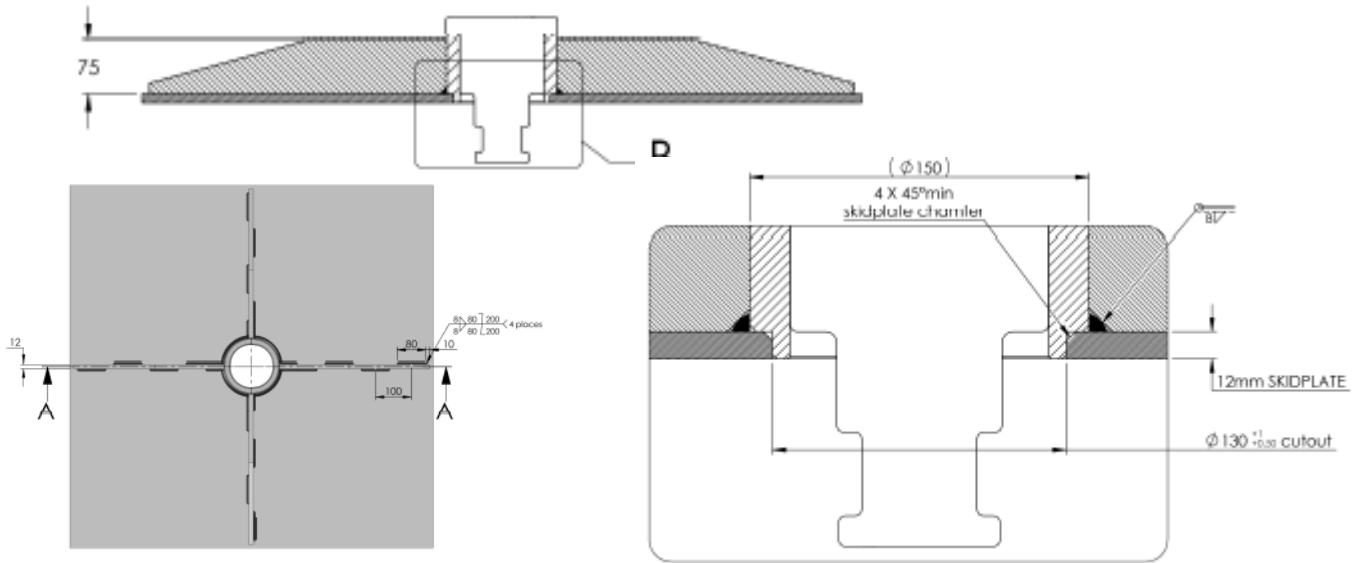


Fig B

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## Drop-in

See the following for the details in regards to the skid plate machining and suggested gussets. More gussets may be required, depending on the application.

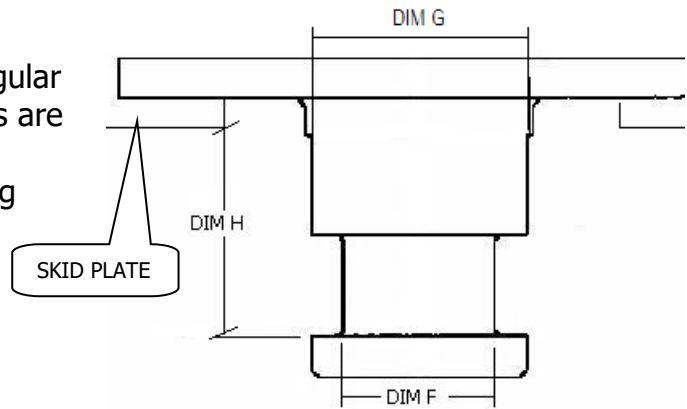


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## WEAR LIMITS

King pin dimensions should be checked at regular intervals and should be replaced if wear limits are exceeded.

Use the FKH Wear Gauges for simple checking (see page 6 for more details).



KING PIN SIZE	DIMENSION	STANDARD	WEAR LIMITS
50mm	F	50.80 ± 0.1 mm	49 mm minimum
	G	73.00 ± 0.1 mm	71 mm minimum
	H	69.5 ± 1.5 mm	73 mm maximum
75mm	F	76.20 ± 0.1 mm	74 mm minimum
	G	102.00 ± 0.1 mm	100 mm minimum
	H	69.5 ± 1 mm	71 mm maximum
90mm	F	89.00 ± 0.1 mm	86 mm minimum
	G	114.00 ± 0.1 mm	112 mm minimum
	H	59.5 ± 1.5 mm	62 mm maximum

## MAINTENANCE

- Inspect king pin and skid plate when completing the monthly turntable service
- Check for damage, wear and cracks (see page 6 for more details).
- After installing a new king pin, check retaining bolt torque again after 10,000km.
- Check retaining bolt torque every 100,000km (This is a guild only, frequency does depend on the application).

**Note:** If excessive wear is detected on the king pin (check wear limits) or the skid plate is scored it is probable that the turntable jaws and top plate on the turntable will bear corresponding wear/scoring. Repair or replace the items as necessary to maintain the integrity of the turntable connection and stay within the allowable wear limits.

**Note:** Re-machining of King Pins or 'building-up' of King Pins by welding to achieve or restore required dimensions is **NOT** an acceptable practice.

IMAGES ARE FOR ILLUSTRATION PURPOSES ONLY

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## **Check the Kingpin!**

Check your kingpin regularly.

Please consider the application, km's travelled, the number of coupling and un-coupling operations and how these actions are performed by various operators, any incidents which may have caused any excessive loads on the king pin?

Using the FKH Wear Gauge will make checking the kingpin for wear and tear easy.

NO-GO gauge: The kingpin MUST be replaced if indicated diameter enters the gauge slot.



Is the Kingpin still squarely installed?

Are there signs of damage to the kingpin?

Are there any impact signs?

Checked the mounting bolts?

Will this kingpin last to the next check?



**If there is the slightest doubt – replace the kingpin!**