

INSTALLATION, MAINTENANCE & SERVICE BULLETIN

Turntable / 5th Wheel

INSTALLATION

Note: **TPJD** = Two Piece Jaw Design (nonadjustable) **SPJD** = Single Piece Jaw Design (adjustable)

The Installation shall be strictly in accordance to AS 4968 (2003), VSB6 Section and other statutory requirements by regulatory authorities.

Choosing the correct 5th wheel for a given application and installing it correctly, is the responsibility of the vehicle builder.

The 5th Wheels are supplied with sufficient lubrication for assembly and storage prior to Delivery and installation.

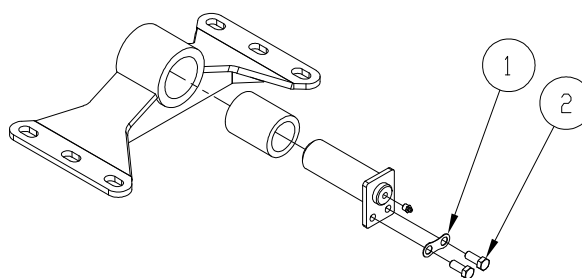
It is essential to fully lubricate the 5th wheel after it has been attached to the chassis before going in to service.

For a **SPJD** 5th wheel, the following adjustment should be done:

1. Loosen lock nut and wind out adjusting bolt (counter clockwise) 4-6 full turns.
2. Open mechanism to the cocked position and reverse under trailer to engage king pin in the normal manner.
3. Wind in adjusting screw (clockwise) until the adjusting bolt contacts the lock wedge, tighten lock nut.
4. It is advisable to adjust the jaws to suit the king pin fitted to the trailer to be used not to a test pin.

For the **TPJD** 5th wheel, there are no adjustments.

For the **SPJD**, Insure lock tab (item 1) is fitted and turned over pivot pin fixing bolt heads (Item 2).



For the **TPJD**, only use Locknut for locking in the foot pin.



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OPERATING THE 5TH WHEEL

Pre-Coupling Procedure for SPJD (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 Remove snap hook, and disengage secondary lock.
- 2 Pull handle forwards then outwards to the cocked position.

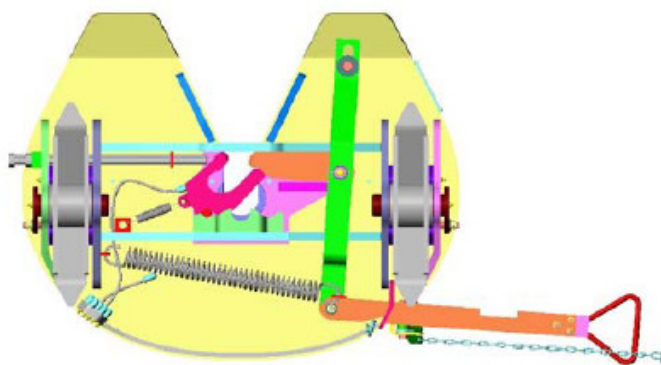
Coupling for SPJD

- 1 Reverse prime mover to the front of the trailer, aligning 5th wheel throat with king pin - stop the vehicle.
Connect air and electrics; ensure top plate (5th wheel) is on a similar level to the skid plate (Trailer). **(Do not allow greaseless 5th wheel 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 5th wheel top plate, the bottom flange of the king pin is visible below the jaws and that the wedge block is in position.
- 4 Replace snap hook to secondary lock.
- 5 Before moving off, with the trailer brakes applied, move the prime mover forward to test connection.

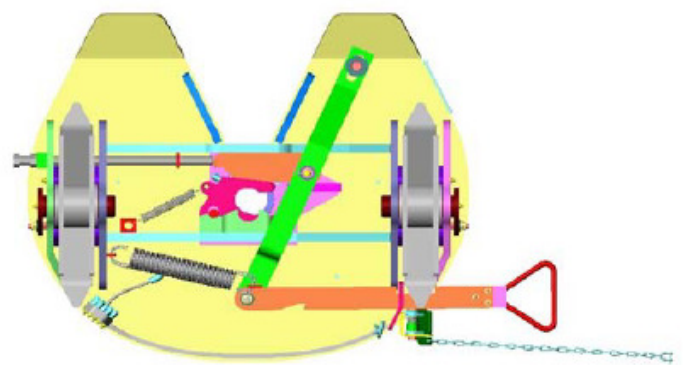
De-Coupling for SPJD

- 1 Ensure that the vehicle is on a level surface and landing gear is extended, disconnect air and electrics.
- 2 Remove snap hook, and disengage secondary lock.
- 3 Pull handle forwards then outwards to the cocked position.
- 4 Drive prime mover forward - mechanism locks open automatically.

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



Jaws open, mechanism "Cocked"



Jaws closed and locked

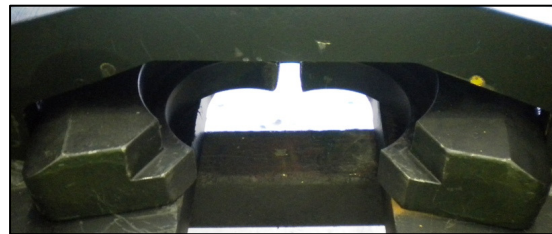
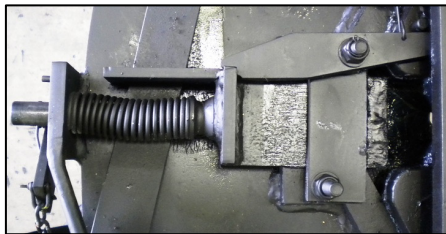
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OPERATING THE 5TH WHEEL

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

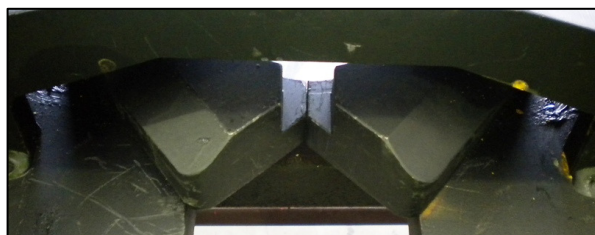
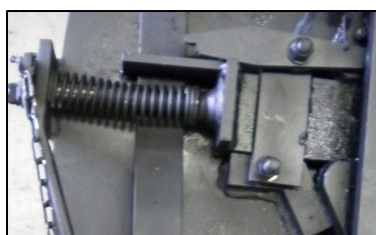
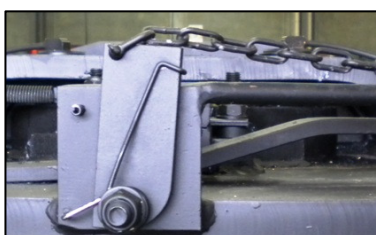
Before initial/1st coupling the jaws and locking mechanism must be set in the "cocked" position.

- 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 tyre 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.



Coupling for TPJD

- 1 Reverse prime mover to the front of the trailer, aligning 5th wheel throat with king pin - stop the vehicle.
Connect air and electrics; ensure top plate (5th wheel) is on a similar level to the skid plate (Trailer). **(Do not allow greaseless 5th wheel 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 5th wheel 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.





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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.

MAINTENANCE

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.

Note: For better lubrication in the jaw, install a grease able induction hardened FKH king pin see Fig. AB
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 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.
Replace jaw set if bore exceeds 2mm when measured in any direction.
Using a pry bar, check for vertical or horizontal movement within the foot pivot area.
Replace pins and bushes if movement exceeds 4mm.

Monthly

De-couple combination and pressure clean all visible grease from 5th wheel.
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.

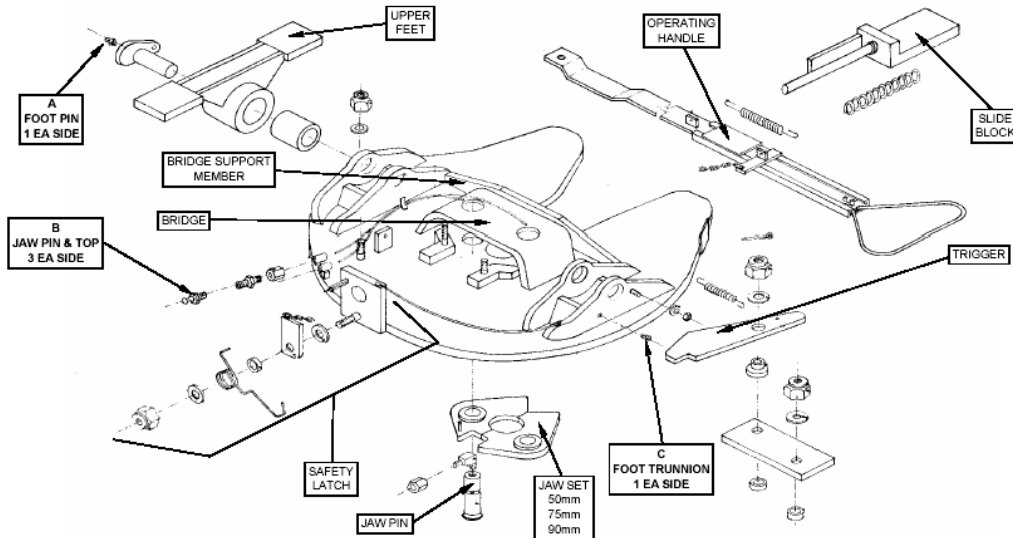
NOTE: If wear is detected in the jaws or top plate is scored it is probable that the king pin and trailer skid plate will bear corresponding wear/scoring and should be immediately attended to.
Fitting a new 5th wheel and connecting it to a worn king pin and skid plate, may damage the new 5th wheel.

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Lubrication Points for TPJD

Grease able Top (Total = 10)
A 1 to each foot pin (2)
B 3 to forward ¼ each side (6)
C 1 to each pivot trunnion (2)

Greaseless Top (Total = 6)
A 1 to each foot pin (2)
B 2 to left hand forward ¼
C 1 to each pivot trunnion (2)



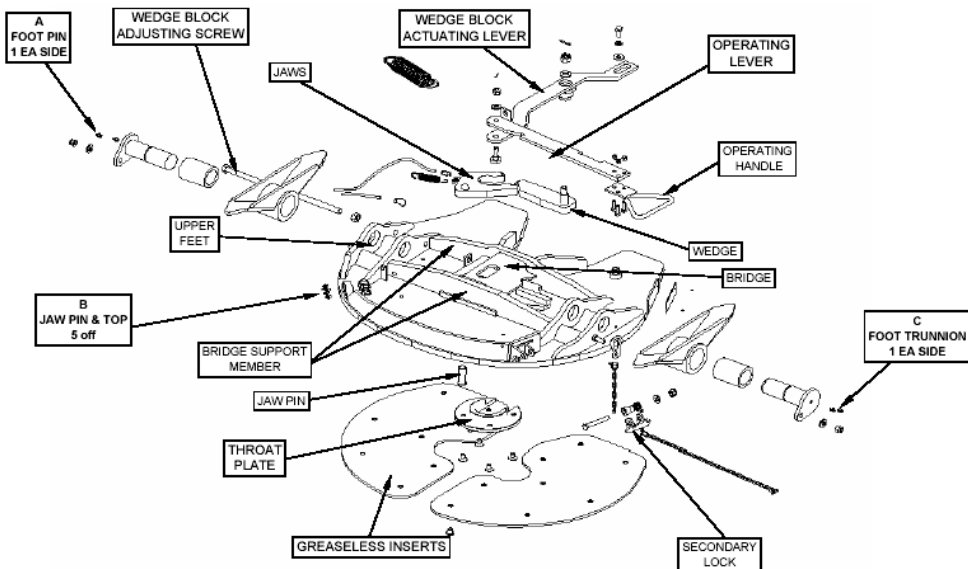
Lubrication Points for SPJD

Fabricated Grease able Top (Total = 9)
A 1 to each foot pin (2)
B 5 to forward ¼
C 1 to each pivot trunnion (2)

Fabricated Greaseless Top (Total = 6)
A 1 to each foot pin (2)
B 2 to left hand forward ¼
C 1 to each pivot trunnion (2)

Pressed Grease able Top (Total = 6)
A 1 to each foot pin (2)
B 4 to forward ¾

Pressed Greaseless Top (Total = 5)
A 1 to each foot pin (2)
B 3 to left hand forward ¾



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ADJUSTMENT PROCEDURE (Only for SPJD)

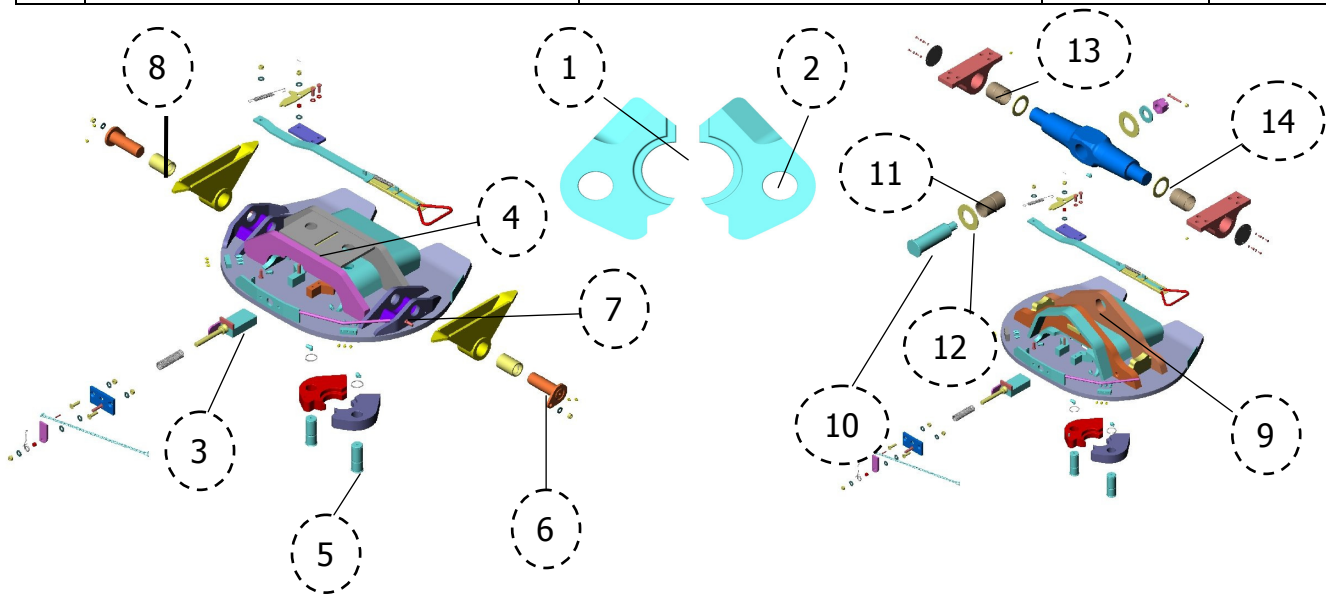
- 1 Loosen lock nut and wind out adjusting bolt (counter clockwise) 4-6 full turns.
- 2 Open mechanism to the cocked position and reverse under trailer to engage king pin in the normal manner.
- 3 Wind in adjusting screw (clockwise) until the adjusting bolt contacts the lock wedge, tighten lock nut.
- 4 It is advisable to adjust the jaws to suit the king pin fitted to the trailer to be used not to a test pin.

WEAR LIMITS

For TPJD:

The following components should be checked at regular intervals and should be replaced if wear limits are exceeded.

	COMPONENT	MODEL	STANDARD DIMENSION mm	MAXIMUM WEAR LIMIT mm
1	Jaw set king pin bore 50mm.	KH174, KH190, KH260, KD300, KS300	50.90	51.70
1	Jaw set king pin bore 90mm.	KH174, KH190, KH260, KD300, KS300	89.10	89.90
2	Jaw set pivot pin bore all.	KH174, KH190, KH260, KD300, KS300	45.12	45.20
3	Slide block width.	KH174, KH190, KH260, KD300, KS300	76.20	75.70
4	Top plate & bridge bore, jaw pivot pin.	KH174, KH190, KH260, KD300, KS300	45.02	45.08
5	Jaw pin diameter.	KH174, KH190, KH260, KD300, KS300	45.00	44.92
6	Foot pin diameter.	KH174, KH190, KH260, KS300	50.70	50.60
7	Foot pin bore upper feet.	KH174, KH190, KH260, KS300	50.90	51.00
8	Foot bush bore	KS300	50.89	51.00
9	Trunnion pivot pin support member bore.	KD300	75.10	75.16
10	Trunnion pivot pin diameter.	KD300	75.00	74.95
11	Trunnion pivot bush bore.	KD300	75.07	75.17
12	Trunnion thrust washer thickness.	KD300	5.00	4.50
13	Trunnion foot bush bore.	KD300	75.07	75.17
14	Trunnion foot thrust thickness.	KD300	7.00	6.25



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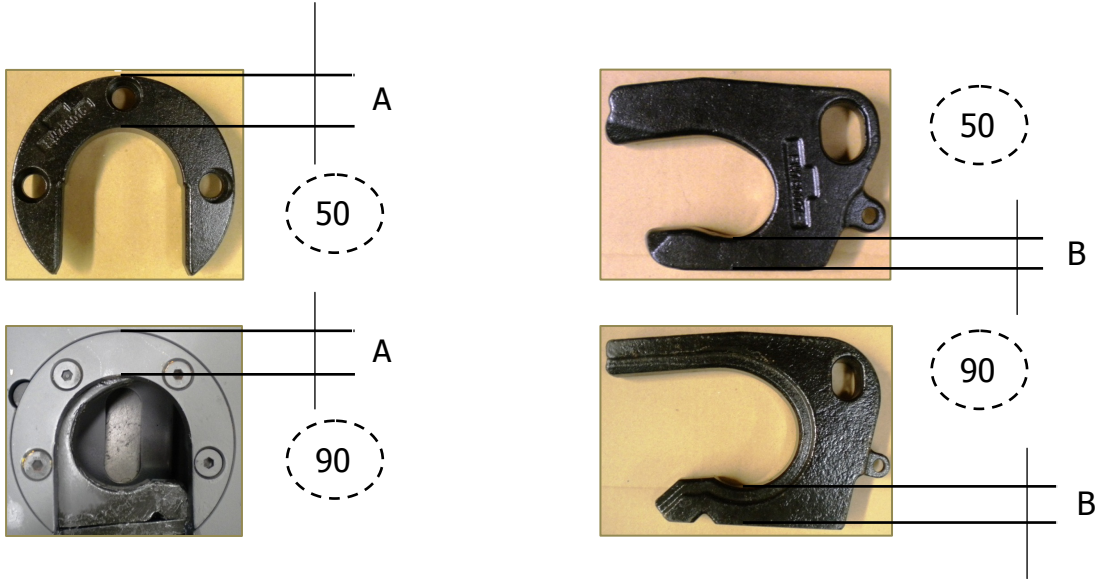
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WEAR LIMITS

For SPJD:



COMPONENT	MODEL	STANDARD DIMENSION	MAXIMUM WEAR LIMIT
		mm	mm
Wearing Ring A	50	33.5	30.5
Wearing Ring A	90	38	35
Lock Jaw B	50	19	17.5
Lock Jaw B	90	30	28

Figure: AB

