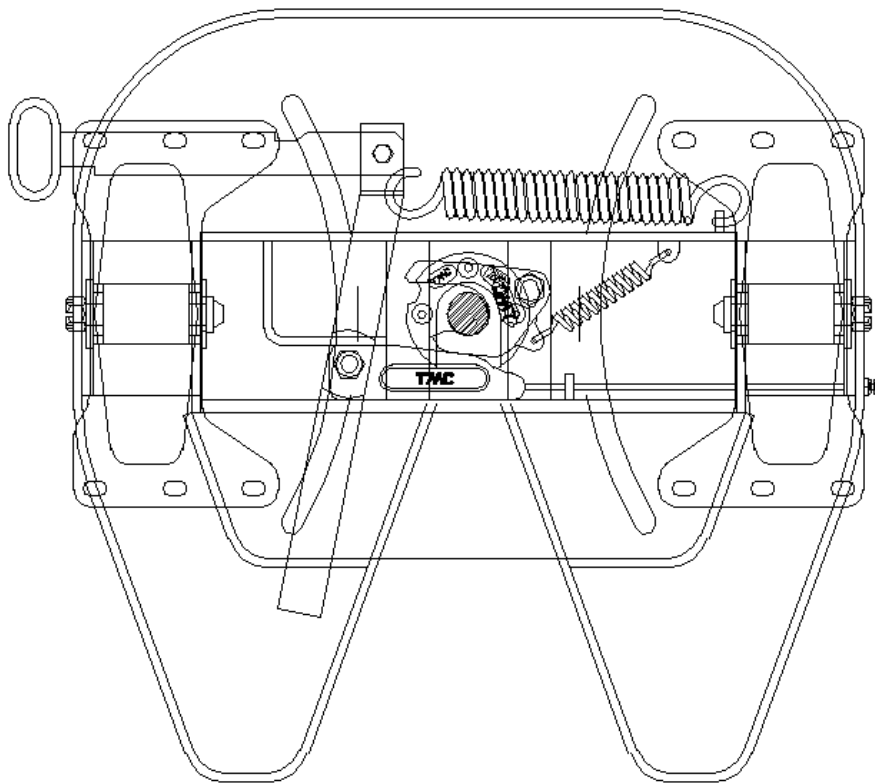




TMC Axle Mfg. Sdn. Bhd.
TMC Fifthwheel Coupler Service Manual

TMC PRESSED STEEL FIFTHWHEEL COUPLER

SERVICE MANUAL



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Engineered To Move

TMC FIFTHWHEEL COUPLER SERVICE INSTRUCTIONS**Recommended Service Schedule.****On Delivery or at 500 km**

Clean and lubricate top surface. Use grease.

Weekly and New Couplings

Clean and examine top surface. Dress score marks and burrs. Discard excessively worn or scored couplers. Lubricate top plate.

Checks hook 'B' and plunger 'C' for wear. Fit dummy Kingpin or couple to trailer, slacken locknut 'P' and withdraw adjusting screw 'R'. Lubricate thread then turn screw until resistance of plunger is felt. Back off the screw by half-a-turn and then lock the nut 'P'. If handle is 'Jammed' in dosed position when uncoupling, the grip on Kingpin is too tight - re-adjust. If correct adjustment cannot be obtained, fit new hook 'B' and plunger 'C'.

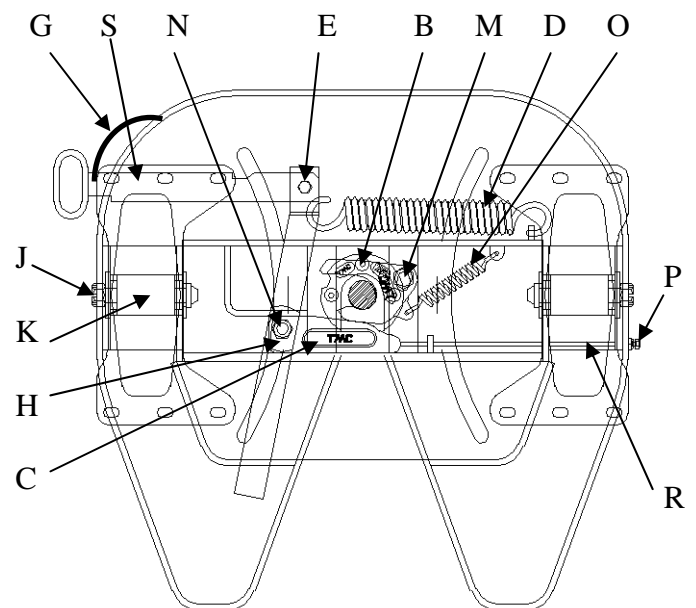
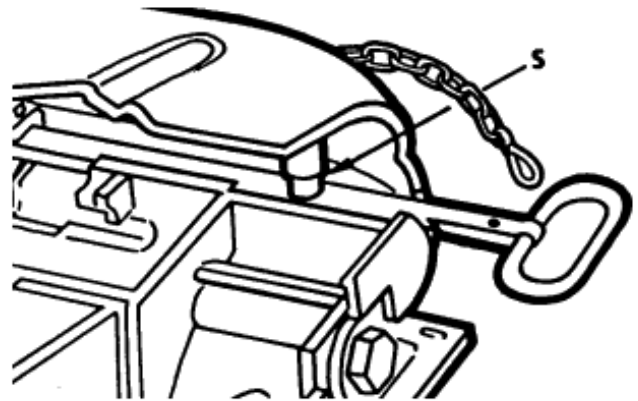
Apply grease to grease valve 'H', handle locking plunger 'S' and lever pivot 'E'.

Check mounting feet M24 set screws 'J' are tight to 350 Nm. (250 ft.lbs.)

Check mounting feet bolts (12 off) are tight to torque 250 Nm. (180 ft.lbs.)

Check rubber mounting feet bushes 'K' for wear by rocking coupler fore and aft. A stiff resistance should be felt with coupler returning to original position when hand pressure is released. Change bushes if necessary, fit new lock washers and tighten M24 set screws 'J' to 350 Nm. (250 ft.lbs.)

Note: Rubber strips peeling from the bush ends can occur due to rubber expansion during tightening and is acceptable providing the prior paragraph 6. Checks are satisfactory.



Check hook and plunger pivot bolts 'M' and 'N' are secure and that welds are intact.

Check hook spring 'O' and main spring 'D' are not stretched or damaged.

Examine security check clip 'G' for damage (if fitted) and renew if necessary.

Every 5000km or monthly (Whichever Comes First)

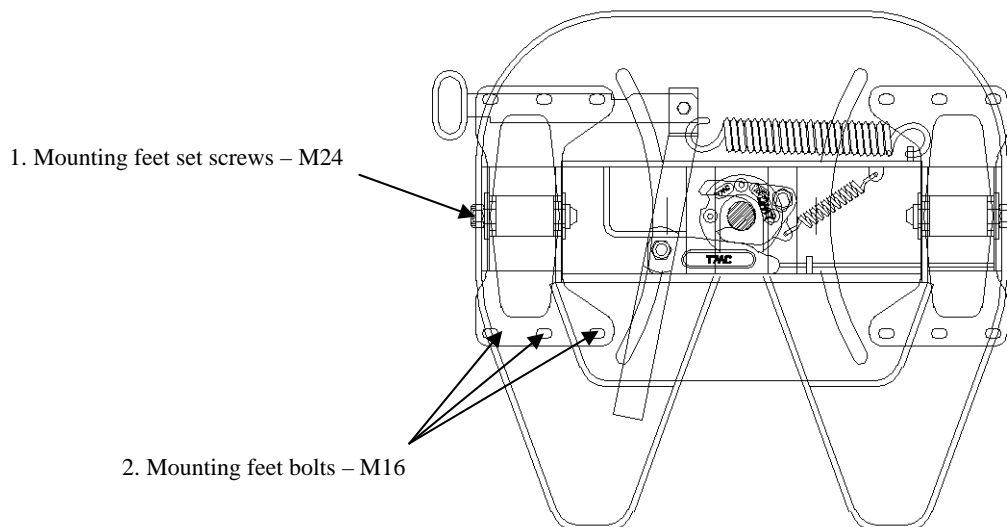
It is recommended that the coupler is removed from the tractor for a more detailed inspection of the reinforcing framework and mounting feet for cracks and weld failure.

Check all torque settings for all fasteners.

Note: These are the minimum recommended service requirements, dependant on service conditions more frequent service and maintenance schedules may be required for the correct operation of the trailer axle.

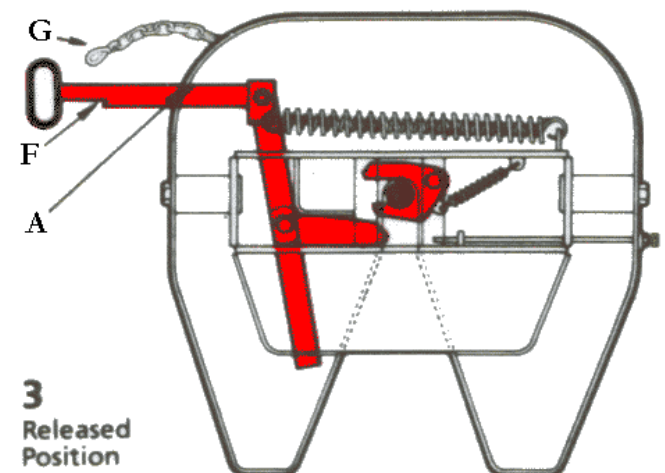
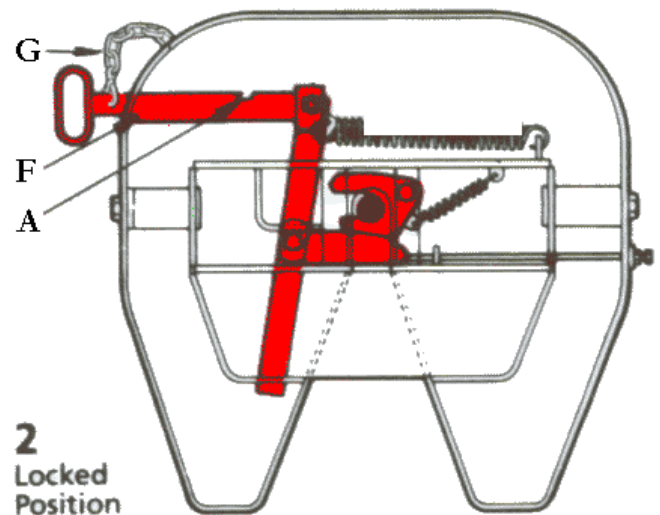
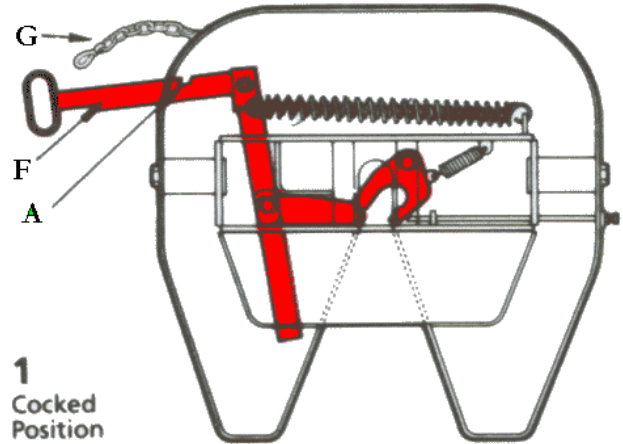
Recommended Torque Settings.

1. **Mounting feet set screws:** - 350 Nm. (M24)
2. **Mounting feet bolts:** - 250 Nm. (M24)



OPERATION INSTRUCTIONS

1. Disconnect security check-dip 'G' (if fitted). Before coupling, the TMC Fifthwheel Coupler is pre-set by lifting up and pulling out operating handle 'F'. Secure handle notch 'A' on coupler plate or in cocked position.
2. Before coupling, adjust height of semi-trailer to match tractor Fifthwheel. Apply trailer handbrake and coupler tractor to semi-trailer. The Kingpin automatically trips and locks the TMC Fifthwheel coupler mechanism. Visually check
 - the trailer seats fully on the TMC Fifthwheel coupler
 - the Kingpin has engaged the TMC Fifthwheel coupler
 - operating handle notch 'F' has located inside the TMC Fifthwheel coupler plate.
3. Refit check-clip 'G' (if fitted) to secure handle to TMC Fifthwheel coupler plate. A spring loaded plunger acting under the handle prevents its movement in transit.
4. To uncouple. Wind semi-trailer landing legs to the ground, apply trailer handbrake and disconnect tractor/trailer brake lines. Disconnect check-clip 'G' (if fitted), lift up and pull out operating handle and secure by notch 'A' on coupler plate. Driving away the tractor resets the TMC Fifthwheel coupler ready to re-couple automatically as Fig. 1



TROUBLESHOOTING INSTRUCTIONS

Problem: Fifthwheel will not lock-up

Probable Cause:

- King Pin position too high
Skid plate should be approximately 50mm lower than the Fifthwheel plate.
- Skid plate not flat, king pin wrongly positioned
Replace skid plate, permissible flatness tolerance 2mm.
- Damaged hook (T2888)
Replace the damaged hook
- Insufficient lubrication
Open mechanism and grease
- Damaged hook spring (T2881)
Replace the damaged hook spring

Problem: Fifthwheel will not unlock

Probable Cause:

- Outfit is not on level ground or is applying pull to Fifthwheel
Repark outfit
- Insufficient lubrication, damaged hook or damaged plunger, resp. incorrect adjustment of locking mechanism
To open jammed Fifthwheel push handle forward and pull out. A second person should stand on the opposite side of the Fifthwheel and strike the boss on release level Operating Lever (T2866) in region of the Handle Pin (T2873), so that the locking bar is loosened. Afterwards any damaged parts must be replaced and locking mechanism readjusted.

Problem: Fifthwheel mechanism will not stay in the preset position.

Probable Cause:

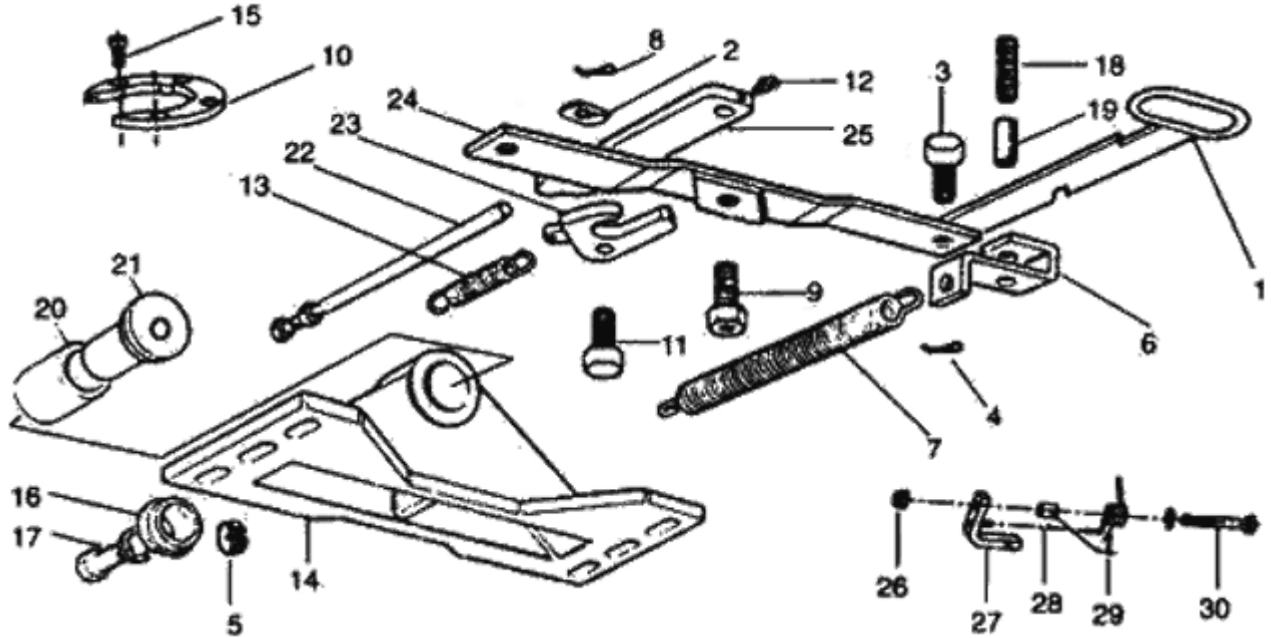
- Damaged hook (T2888)
Replace the damaged hook
- Damaged hook spring (T2881)
Replace the damaged hook spring

Problem: Movement between Fifthwheel and Trailer

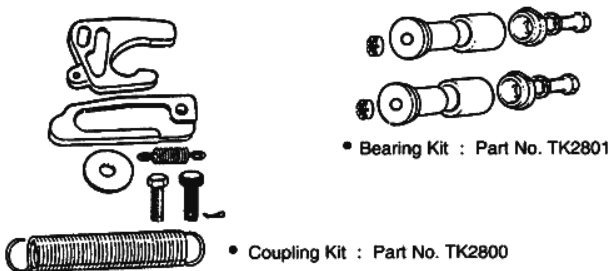
Probable Cause:

- Excessive play in the mounting feet bearings
In case of wear replace the bearings (using bearing kit TK2801)
- Excessive play in the locking mechanism
Examine king pin and replace if necessary. If there is still wear although the king pin is new, adjust locking mechanism. If the wear remains, replace the hook and horseshoe ring.

TMC Fifthwheel Coupler Spare Parts Listing.



Item	Part No.	Description	Item	Part No.	Description
1	T2875	Handle Assy.	16	T2878	Collar
2	T2886	Washer	17	T2879	Set Screw
3	T2874	Handle Pin	18	T2869	Spring-Handle
4	T2873	Split Pin	19	T2868	Sleeve-Handle
5	T2877	Nut Castle	20	T2867	Bush
6	T2872	Connector-Handle	21	T2876	Bearing Bolt
7	T2882	Main Spring	22	T2880	Adjuster Rod Assy.
8	T2885	Split Pin	23	T2888	Hook
9	T2883	Bolt-Plunger	24	T2866	Operating Lever
10	T2889	Horseshoe Ring	25	T2884	Plunger
11	T2887	Hook Pin	26	T2865	Nut Castle
12	T2871	Grease Nipple	27	T2864	Latch Lever
13	T2881	Hook Spring	28	T2863	Collar
14	T2870	Foot-173mm Height	29	T2862	Spring-Handle
15	T2890	Set Screw	30	T2861	Bolt



TK2801 Bearing Kit
(Item 5/16/17/20/21)

TK2800 Coupling Kit (Item 2/6/
7/9/11/13/23/25)