

# ME TRAILERS

## USER'S HAND BOOK



### *Braked Trailers & Chassis*



# SERVICE SCHEDULE

## BEFORE EACH JOURNEY

<u>TASK</u>	<u>SEE SECTION</u>
Check the trailer visually for damage	
Check connection to towing vehicle	1.4
Check tyre pressures	

## AFTER THE FIRST 500 MILES OR 1 MONTH

(In addition to the above)

<u>TASK</u>	<u>SEE SECTION</u>
Re-torque wheel nuts/bolts	4.5
Check/re-adjust braking system	3.2
Check wheel hub for side play	4.1

## AFTER EVERY 3000 MILES OR 3 MONTHS

(In addition to the above)

<u>TASK</u>	<u>SEE SECTION</u>
Check/re-adjust braking system	3.2

## AFTER EVERY 12000 MILES OR 12 MONTHS

(In addition to the above)

<u>TASK</u>	<u>SEE SECTION</u>
Lubricate the 50mm ball head (if fitted)	5.0
Check/lubricate jockey wheel and/or prop stand	
Apply grease to overrun coupling grease nipples	5.0

## AFTER EVERY 24000 MILES OR 24 MONTHS

(In addition to the above)

<u>TASK</u>	<u>SEE SECTION</u>
Check/clean/re-grease wheel hub bearings	4.0

# GENERAL INFORMATION

**Please read and understand this handbook before operating your trailer for the first time.**

In order to maintain the function and safety of your trailer, only original parts of the manufacturers design must be used, and servicing undertaken by qualified personnel

## **TOWING LEVEL**

Ideally the trailer should be towed level and not with the draw bar leaning up or down excessively. Some countries allow  $\pm 4^\circ$  from the level (approximately  $\pm 100\text{mm}$ ) but in others it remains at the discretion of the user for safe operating conditions.

## **1.2 CAPACITIES**

For safety, warranty and legal reasons, do not exceed the maximum allowable fully laden mass.

On a trailer's drawbar assembly there may be 3 or more labels/stampings stating the maximum masses and other parameters. It is important to be aware that the label or stamping stating the lowest maximum gross mass overrules all others; generally the label affixed to the body of the trailer by the trailer or plant manufacturer states the actual maximum, as this will allow for wheel and tyre capacities.

## **1.3 GALVANISED TRAILERS**

The galvanized finish changes from bright silver when new to dull grey. This is perfectly normal, as the galvanized surfaces form a layer of oxide, protecting the reactive zinc and the underlying steel structure from further corrosion.

## 1.4 TYRES & WHEELS

The standard range of tyres fitted to our trailers are:

<b>TYRE SIZE</b>	<b>LOAD INDEX</b>	<b>SPEED SYMBOL</b>	<b>PRESSURE BAR (PSI)</b>	<b>CAPACITY kg/Axle</b>
<b>145 R 10</b>	74	N	2.7 (38)	750
<b>5.00 x 10 x 8</b>	84	N	5.0 (72)	1000
<b>145 R 10 C 8</b>	84	N	4.5 (65)	1000
<b>195/55 R 10</b>	98	N	6.25 (90)	1500
<b>20.5 x 8.00 - 10</b>	77	M	2.4 (35)	824
<b>155/70 R 12</b>	104	N	4.5 (65)	1000-1300
			5.25 (76)	1500
			6.25 (90)	1800
<b>145/70 R 13</b>	78	N	3.0 (44)	850
<b>155 R 13</b>	84	N	3.0 (44)	1000
<b>165 R 13 C 8</b>	96	N	4.5 (65)	1420
<b>175 R 13 C 8</b>	97	N	4.5 (65)	1460
<b>185/70 R 13</b>	106	N	5.25 (76)	1500
			6.0 (87)	1900
<b>195/50 R 13</b>	104	N	4.5 (65)	1000-1300
			5.25 (76)	1500
			6.5 (95)	1800
<b>185 R 14 C 8</b>	104	N	4.5 (65)	1890
<b>195 R 14 C 8</b>	106	N	4.5 (65)	1995
<b>205 R 14 C 8</b>	109	N	4.5 (65)	2160
<b>205/75 R 16 C</b>	113	N	5.25 (76)	2300
<b>215/75 R 16 C</b>	116	Q	5.25 (76)	2500
<b>205/75 R 17.5</b>	124	M	8.1 (117)	3200
<b>215/75 R 17.5</b>	135	J	8.5 (123)	4360

Within the European Union, tyres must be marked with a Load Index (LI) and Speed Symbol, which designate the maximum carrying capacity per tyre at the maximum speed. The above values are advisory and may vary between tyre brands. Never exceed the maximum pressure stated on the tyre sidewall.

It is important to ensure that replacement tyres are of the same size, construction, load index and speed symbol as shown on the sidewalls of the original tyres.

The maximum tyre pressure marked on the tyre is usually compatible with the load index and speed symbol. If in doubt, check with the manufacturer or with us.

## **1.5 CONNECTION TO TOWING VEHICLE**

Firstly, check the compatibility of your 50mm Ball Coupling or Towing Eye with the Towing Jaw/Ball connection on your vehicle.

Always fit the breakaway cable or safety chain in a loop, fastening back on itself, to a substantial integral point on the towing vehicle. Ensure that the effective length is as short a possible, but still allows articulation (e.g. for cornering) without applying the brakes.

Connect the trailer lights using the plug and lead provided and check the all lamps are functioning.

Always ensure the trailer is evenly loaded without exceeding the maximum nose weight (normally between 100 and 150kg dependent on model) shown on the coupling. Make sure that all loads are restrained and not likely to cause a hazard.

When using ramps or skids, take care that the trailer is standing on level ground, the handbrake is applied and the ramp supports or prop stands are in the lowered position.

Before setting off, always check that all sideboards, tailgates, ramps or skids are safely stowed, jockey wheel and prop stands raised and all locking pins/devices are in place.

## **1.6 TOWING SPEEDS**

The maximum UK speed limit for trailers is 60mph on motorways and unrestricted dual carriageways. On other unrestricted roads the limit is 50mph. You must not travel in the right-hand lane of a motorway with three lanes or more, if you are driving a vehicle towing a trailer.

## **2.0 ROUTINE CHECKS**

### **2.1 VISUAL INSPECTION**

Regular visual inspections will usually identify accidental damage if conducted systematically..

### **2.2 TYRE DAMAGE**

It is dangerous to neglect tyre damage, and should a blister, rupture or cut be detected, exposing the casing, or the tyre suffers a violent impact (e.g. against a kerb) such that there is a risk of internal damage, it is advisable to have the tyre examined by a specialist as soon as possible.

### **2.3 WHEEL DAMAGE**

Wheels damaged or distorted, or having wheel nut/bolt seatings cracked or deformed must not be repaired or used in service.

**WARNING:** If the wheel is damaged, it is possible that the brake drum, stub axle or complete axle may have been damaged, so investigate further.

### **2.4 TOWING EYE, BALL HITCH & DRAWBAR ATTACHMENT**

Gripping the towing eye or ball in both hands, pull back and forth, up and down, feeling for excessive moment. Replace any parts that are bent or deformed in anyway. Check the attachment of the Coupling Body to the Drawbar.

### **2.5 HAND BRAKE**

Apply hand brake checking operation and effectiveness. If in doubt re-adjust braking system (see section 3.2).

**WARNING:** If the trailer is on a slope, chock the wheels as an added precaution. We do not recommend leaving the trailer unattended on a steep hill.

### **2.6 LIGHTS**

Attach the electrical plug and check that all the lights are functioning correctly and the lenses are in good condition.

## 3.0 BRAKING SYSTEM

### 3.1 WHEEL JACKING

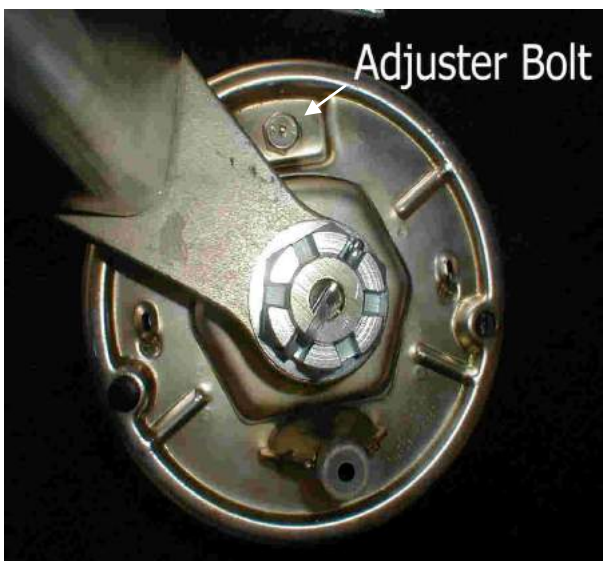
On level ground, with the hand brake lever in the off position and overrun coupling draw tube shaft fully extended forwards, secure one wheel with wheel chocks. Position your jacking device behind the opposite wheel, as near to a main longitudinal chassis member as possible, lift the wheel clear of the ground, then secure with suitable axle stands.

### 3.2 BRAKING SYSTEM ADJUSTMENT

Where the transmission rod and brake cables are already connected, take the tension out of the system by winding back the nuts on the rod behind the compensator.

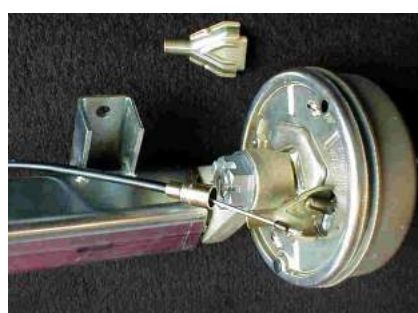
It is now possible to begin the set up procedure:

### 3.3 WHEEL BRAKES



These can be adjusted by means of a 17mm, 19mm or 24mm AF Spanner (dependent on brake type) on the adjuster bolt head at the rear of the brake back plate. Rotate each wheel only in the forward direction of travel, whilst tightening the bolt until the wheel locks. Then, gradually back off the adjuster nut until the wheel can rotate forwards with just a slight resistance/audible brushing of the brake drum on the brake lining. (This is best judged with the wheel and tyre fitted to the brake drum).

If not already connected, connect the Bowden (sheathed) cables to the brakes. Use the Handbrake to apply the brakes several times to remove any stretch from new brake cables



## 3.4 COUPLING AND TRANSMISSION SYSTEM

Attach the opposite end of the outer cables to the anchor plate on the axle or drawbar, using the nuts provided.

Connect the inner cables to the compensator, locking the 2 nuts together in front of the compensator for each cable.

If not already connected, attach the rear end of the brake rod to the compensator centre hole, using the plain nuts behind the compensator to adjust the brake rod, until the overrun output lever is against the coupling drawtube.

Maintain the compensator at 90° to the draw bar for even distribution of force into each cable. Ensure the cables are not 'kinked' or damaged.

The handbrake mechanism operates on an 'over-centre' principal with the handbrake lever connected to a powerful compression spring.

**When the braking system is being serviced, care should be taken to ensure the handbrake does not spring up.**

## 3.5 BRAKE PARTS

Brake shoes are recommended to be replaced when the lining thickness measure less than 2mm, as it is likely that they will be worn out before the next service.

Always replace both brake shoes together, regardless of the lining thickness on the other shoe. It is further advised that brake shoes should ideally be replaced as an axle set to avoid uneven braking from side to side.

**Right Hand Knott 200 x 50 Auto Reverse Brake back plate assembly shown.**

Note position of sliding shoe relative to adjuster or expander. To function correctly the brake must be assembled in this way.

Left Hand Brake is a mirror image





## 4. 0 WHEEL HUB ASSEMBLIES

### 4.1 INSPECTION

Ensure the brake shoes (if braked) are clear of the drum with no interference. Clean hub to remove any road debris.

Rotate the hub slowly – there should be no roughness or restriction

Rotate the hub rapidly – there should be no rumble, rattle or high-pitched noises.

Rock the wheel while holding at the top and the bottom to detect essential bearing endplay. The maximum movement should be 2mm measured at the Wheel Rim.

If any clearance / free movement appears to emanate from the suspension, check the axle housing for damage.

### 4.2 WHEEL HUB ASSEMBLIES WITH TAPER ROLLER BEARINGS

In order to re-set, remove the grease cap, split pin and set the Slotted nut.

It is generally accepted that a finger tight slotted nut will result in a correct setting and running clearance for normal bearing life. Always replace the split pin with a new one when setting is complete and re-fit the grease cap.

The wheel bearings are greased on assembly at the factory and should be re-greased at a minimum every 24000 miles or 2 years with axle grease 'Elf Multi 2' or equivalent.

Use the service interval to inspect the bearings for wear/damage. Replace the seal if necessary, lubricating the lip and bore, not the outside diameter.



**WARNING**

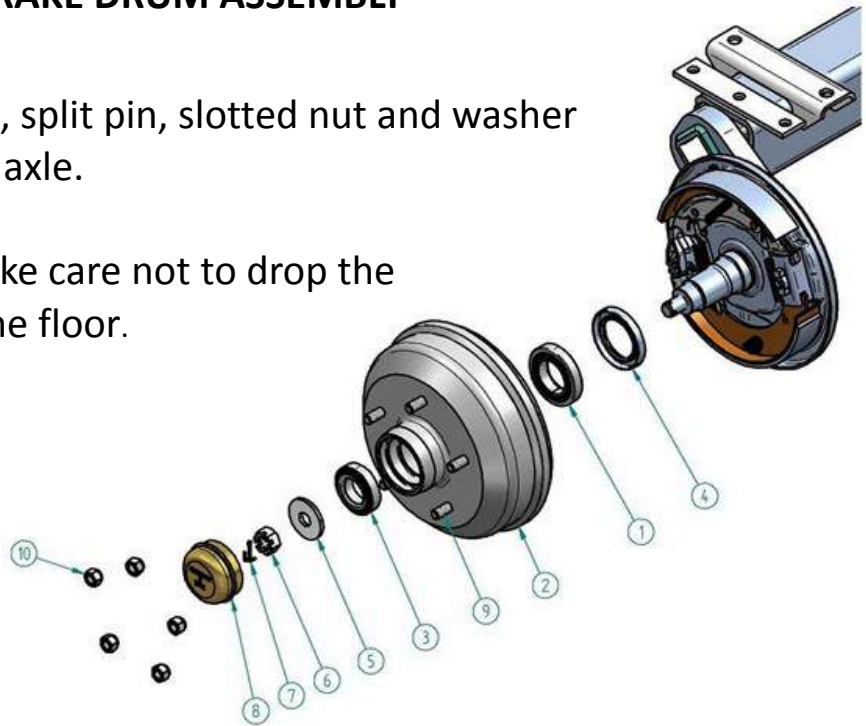
It is our experience that the majority of bearing failures are as a result of over-tightening of the Slotted Nut, or failure to replace contaminated or depleted grease (e.g. due to water ingress, particularly salt water).

**It is as important not to over pack the hub with grease, as it is to not allow bearings to run dry.**

### 4.3 REMOVAL OF HUB / BRAKE DRUM ASSEMBLY

Remove wheel, grease cap, split pin, slotted nut and washer and pull drum off the stub axle.

To avoid contamination, take care not to drop the outer bearing cone onto the floor.



### 4.4 WHEEL HUB ASSEMBLIES WITH UNIT BEARINGS

These hubs require no maintenance, however at intervals of 24000 miles or 12 months, the wheel hubs should be checked for side play and the complete hub replaced if necessary.

**WARNING:** When refitting the hub always fit a new nut and tighten to a torque of 280Nm (206 lbf.ft.)

### 4.5 WHEEL NUT / STUD TORQUE SETTINGS

WHEEL NUT / STUD	Nm		Lbf.ft	
	MIN.	MAX.	MIN.	MAX.
WHEEL NUT 3/8" UNF	47	54	35	40
WHEEL NUT 1/2" UNF	70	110	50	80
WHEEL NUT 5/8" UNF	135	160	100	120
WHEEL NUT M18 x 1.5	245	300	180	220
WHEEL STUD M12 x 1.5	65	90	50	65
WHEEL STUD M14 x 1.5	120	150	90	110

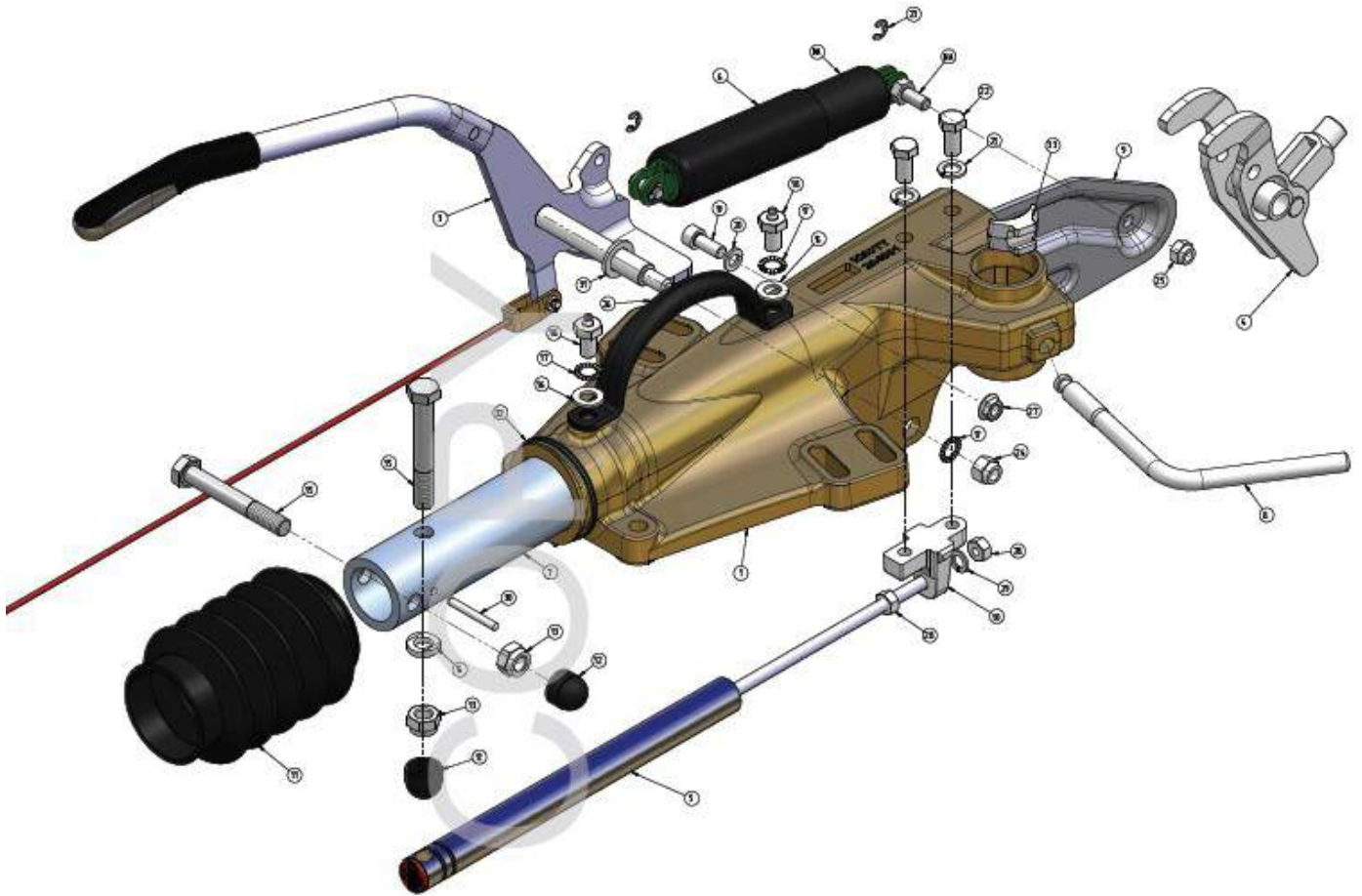
## 5.0 OVERRUN COUPLING ASSEMBLY

The Coupling is greased on assembly, but will require periodic maintenance to ensure a smooth operation of the braking system.

Re-grease the draw tube via the grease nipples provided at 6000 mile or 6 month intervals. Also ensure correct functioning of all pivots, levers, ratchets and the spring store assembly. Grease all points of movement.

The hydraulic damper is sealed and maintenance free but its operation should be checked if braking problems occur. If the damper is to be removed, enclose it in a strong cloth and do not stand directly in line as the damper contains oil and gas under high pressure. To remove, release the 2 bolts at either end.

The damper will need to be pre-compressed to be fitted. This is normal, and ensures that the braking system works efficiently and that the trailer is towed on the drawtube, not on the damper as this would lead to premature failure.



## 7.0 TROUBLE SHOOTING

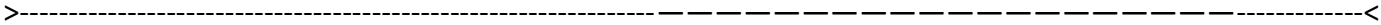
SYMPTOM	CAUSE	RECTIFICATION
Braking is one-sided	Incorrect adjustment at wheel	Adjust
	Brake cable seized	Free off or replace
	Brake lining contaminated with grease	Replace
Braking during mild deceleration	Coupling damper is weak or ineffective	Replace
	Brakes over-adjusted	Adjust
Trailer Brakes snatch when braking	Brakes over-adjusted	Adjust
	Brake cable(s) sticking	Free off or replace
	Brakes under-adjusted	Adjust
	Coupling damper is weak or ineffective	Replace
	Drawtube sticking	Check over full stroke, lubricate if necessary
Brake Judder	Brake lining contaminated with grease	Replace
	Failure of bond between brake lining and shoe	Replace
	Distorted/cracked Brakedrum	Replace
	Drums have rusty patches on braking surface	Clean up with abrasive paper and wipe out
Trailer brakes lock up when reversing	Brakes over-adjusted	Adjust
	Incompatibility between Coupling and Brakes	Consult manufacturer(s)
Trailer brakes inoperative	Brakes under-adjusted	Adjust
	Brake lining contaminated with grease	Replace
	Brake cables seized	Free off or replace
	Brake linings worn out	Replace
Hot brakes	Brakes over-adjusted	Adjust
	Pull off springs stretched/broken	Replace
	Brake cables seized	Replace
Handbrake will not hold on a slope	Brakes under-adjusted	Adjust
	Incorrect setting of Spring Store	Adjust

## 8.0 MISC TORQUE FIGURES

Application	Fastener Size	Nm		Lbf.ft	
		MIN.	MAX.	MIN.	MAX.
Towing Eye Cross bolts	M12	75	75	55	55
50mm Ball Head Cross Bolts	M12	75	75	55	55
Coupling to Drawbar	M12	60	75	45	55
General Torque settings for Grade 8.8 Fasteners used with Self Locking Nuts					
Fastener Size	Nm		Lbf.ft		
	MIN.	MAX.	MIN.	MAX.	
M8 x 1.25	25	25	17	17	
M10 x 1.5	50	50	35	35	
M12 x 1.75	90	90	65	65	
M14 x 2.0	130	130	97	97	
M16 x 2.0	200	200	150	150	

# NOTES

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If you sell your trailer, please pass on this handbook to the new owner. We would also be grateful if you would advise us of any change of ownership.

Trailer Serial Number  
(VIN): \_\_\_\_\_

Model: \_\_\_\_\_

New Owner: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Tel. No.: \_\_\_\_\_

Date of Sale: \_\_\_\_\_



<b>TRAILER SERIAL No.</b>	
<b>LOCKING COUPLING HEAD KEY No.</b>	

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