



INSTRUCTION MANUAL

170SF

HEAVY DUTY MODULAR SLIDER



This Instruction Manual covers the Fontaine 170SF Heavy Duty Slider.
Please be aware of the following symbols when carrying out the tasks.



WARNING

Task contains dangers that could cause serious physical injury or significant material damage, if the safety instructions are not adhered to.



CAUTION

Task could result in minor physical injury or material damage, if the safety instructions are not adhered to.



ADVICE

Any additional important information related to the task.

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SAFETY INFORMATION

1. Safety information

It is important to remember that a fifth wheel is a safety critical item and should be treated as such. Proper preventative maintenance, inspection and lubrication are essential for a long, safe and trouble-free service life. Please observe the relevant safety regulations that apply for working with fifth wheel couplings, tractor units and semi-trailers. These regulations will vary in different countries.

1.1 Operation

- › Only authorised users are permitted to use the fifth wheel coupling.
- › Do not use the fifth wheel coupling and rubbing plates if they show any sign of technical problems.
- › The rubbing plate must be larger than the support area of the fifth wheel coupling.
- › Any sharp edges must be removed from rubbing plate to prevent damage to the fifth wheel coupling or the top plate liner, if fitted.
- › When connecting a semi-trailer ensure all safety regulations are adhered to. e.g. Health and Safety at Work Regulations. A semi-trailer should only be connected on firm, flat ground.
- › The rubbing plate should ideally be slightly lower than the top plate when coupling but not by more than 50mm.
- › Ensure the locking mechanism is properly locked before starting every journey. The vehicle must only be driven when the mechanism is locked and secured, even when driving without a semi-trailer.

1.2 Installation

- › Prior to installation of a fifth wheel on a vehicle the following should be considered:-
 - › Current Legislation
 - › OEM Vehicle Installation Instructions
 - › Fontaine Vehicle Specific Mounting Instructions
- › Installation work must only be completed by authorised specialists.
- › Installation areas are defined by the tractor unit manufacturer and must not be changed.
- › In all cases fifth wheel equipment should be mounted using the mounting holes positioned as supplied.

The fifth wheel coupling must be mounted on the vehicle in compliance with the requirements of regulation ECE R55-01. It may also be necessary to comply with the licensing regulations of the appropriate country.

1.3 Servicing

- › Only use specified lubricants for the servicing work.
- › The servicing, cleaning and maintenance work should only be completed by trained personnel.
- › Only use Original Equipment parts.

SAFETY INFORMATION

1.4 Fifth wheel rating

The Fontaine 170SF Heavy Duty Slider is designed and built in accordance to ECE Reg R55-01 class J and have a rating of 25 Tonnes Imposed Load (U) and D-Value of 170kN. These ratings can be found on the "Type Approval Label" of the fifth wheel equipment. Whilst the Imposed Load is straight forward to determine (the vertical load at the kingpin) the D-Value is calculated in the equation below:

$$D = g \times \frac{0.6 \times T \times R}{T + R - U} \text{ (kN)}$$

Where:

g = gravity (9.81m/s²)

T = Total weight of the tractor unit (including U)

R = Total weight of the semi-trailer

U = Imposed load on tractor

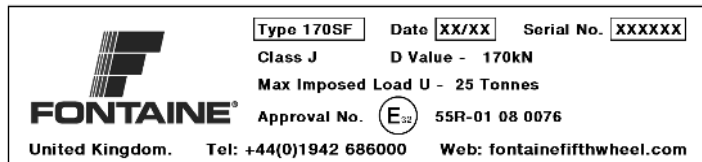


The fifth wheel coupling chosen should be rated with loads equal to or higher than the calculated values. Under no circumstances should a coupling be fitted where the calculated rating is higher than the values indicated on the equipment.

This calculation is also available on our website:

www.fontainefifthwheel.com

1.5 Type approval label



Each fifth wheel's type approval label contains the following data:

- › 1. Fifth wheel type
- › 2. Date produced (WW/YY) and serial number
- › 3. Class and D-Value
- › 4. Max imposed load
- › 5. Type approval number
- › 6. Contact information

1.6 Additional safety information



The operators must comply with regulations set in the Health & Safety at Work Act of their country. The safety information set in the vehicle owner's handbook for the tractor unit must also be adhered to.

When operating the fifth wheel, the operator should only interact with the areas described in the operation section (3) of this booklet. The following must also be observed:

- › Any operation of the unit must only be carried out by authorised persons.
- › All limbs should be kept clear of moving parts to avoid any personal injury.
- › It should only be operated if in good and technical condition.
- › Coupling of a semi-trailer must only occur on an area of firm, flat ground.

INSTALLATION

2. Installation

This section covers the installation of the slider onto the vehicle, through positioning and fasteners needed. It also covers the fitting the fifth wheel to the slider.

2.1 Mounting bolts

Coupling equipment is usually supplied with the correct mounting fasteners for installation purposes (unless specifically requested otherwise). The fasteners supplied will be rated at the correct grade for the installation.

The below table applies to standard length sliders, for long travel additional bolts may be required.

TRACTOR TYPE	FASTENERS	TORQUE (Nm)
DAIMLER	M20 G10.9 (x12)	500 - 520
SCANIA	M18 G10.9 (x12)	400 - 410
IVECO/MAN/DAF/RENAULT	M16 G10.9 (x12)	290 - 300
VOLVO	M14 G10.9 (x16)	190 - 200

Slider to Tractor Chassis Fastener Requirements; Type, Grade, Quantity and Torque

2.2 Positioning of equipment on vehicle

Fifth wheel equipment should always be fitted to the vehicle using the vehicle manufacturer's fifth wheel position as this determines correct axle loading and compliance with national legislation.

In the case of sliding fifth wheels, when a ramp is supplied, the slider should be positioned so that in its rearmost position it is clear of the ramp.



Mounting bolts used in the installation of the slider

The fasteners should be orientated so that they are fed downward through the slider rail and vehicle chassis as in the image above.

Once fitted, lubricate all parts according to the service areas section (4) within this booklet.

If any doubt exists relating to the correct position of the equipment on the vehicle then the Fontaine Technical Department should be consulted.

2.3 Slider lubrication

Prior to going into operation the slider must be lubricated with a thin ISO22 inhibitor oil in areas listed in the servicing section (4) of this booklet.



Fontaine cannot accept responsibility for any loss or damage caused by equipment which has been modified or that has not been fitted in an authorised manner.

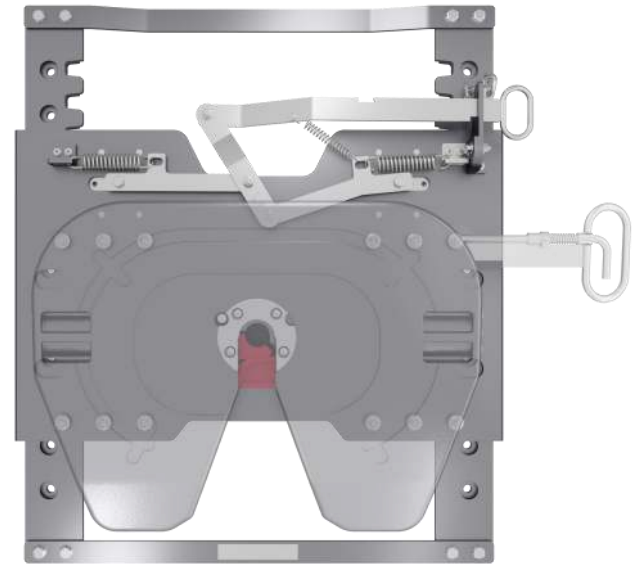
INSTALLATION

2.4 Mounting of fifth wheel coupling to slider

A standard fifth wheel coupling should be mounted using 12 bolts size M16 and grade 10.9 unless it is a special application is required. All bolts must be torqued to $280\text{Nm} \pm 30\text{Nm}$.

2.5 Slider and fifth wheel lubrication

Prior to going into operation the areas listed in the fifth wheel booklet's servicing section must be well lubricated using a high pressure grease with a lithium or calcium base. The slider must be lubricated with a thin ISO22 inhibitor oil in areas listed in the servicing section (4) of this booklet.



Faded fifth wheel to show 12 mounting bolts between fifth wheel mounting brackets and sliding carriage



Fontaine cannot accept responsibility for any loss or damage caused by equipment which has been modified or that has not been fitted in an authorised manner.

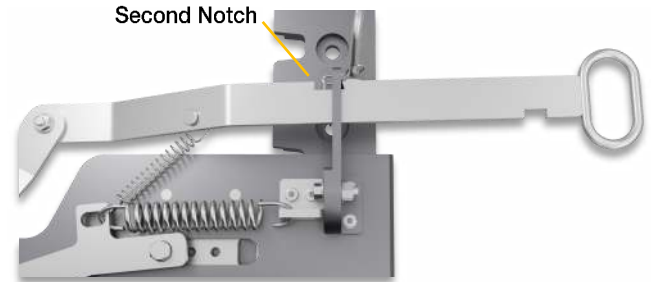
OPERATION

3. Operation

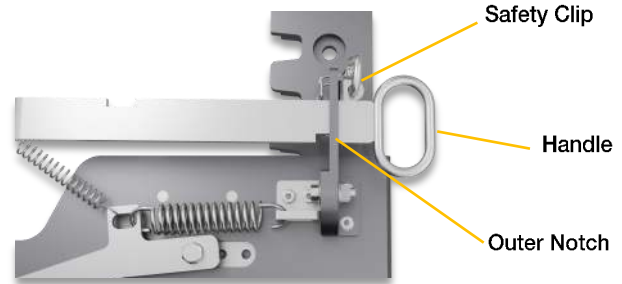
All Fontaine sliders are designed, tested and approved for use with Fontaine fifth wheel couplings only. The following instructions should be used in conjunction with the fifth wheel operating instructions.

3.1 Position adjustment of manual slider

1. With the vehicle coupled to the trailer, lower the landing legs to floor.
2. Remove safety clip from the slider handle.
3. Push handle towards the front of the vehicle until it contacts the side of the handle slot.
4. Pull the handle out until the second notch can be latched on the front of the bracket slot.
5. Lower the tractor air suspension slightly, enough to transfer the weight of the trailer from the fifth wheel to the landing legs.
6. Manoeuvre the vehicle until the fifth wheel is in the required position.
7. Stop the vehicle and apply handbrake.
8. Release the handle (by pushing the handle towards the rear of the tractor) and ensure that the outer handle notch returns to the locked position. If the plungers do not fully engage into the rails, move the tractor forwards or backwards as necessary until they lock in place. Only then can the safety clip be fitted.
9. Refit safety clip. If the clip cannot be fitted report the fault to your workshop.



Mechanism in open position as in step 4



Handle in closed locked position as in step 9



It is important to remember that a fifth wheel and auxiliary equipment are safety critical and should be treated as such.

Proper preventative maintenance, inspection and lubrication are essential for a long, safe and trouble-free service life.



Under no circumstances must the product be used without the safety clip being fitted.

SERVICING

4. Servicing

It is important to remember that a sliding fifth wheel is a safety critical item and should be treated as such. Proper preventative maintenance, inspection and lubrication are essential for a long, safe and trouble-free service life. This section provides information on the maintenance of the slider, for the fifth wheel, please refer to the relevant Fontaine booklet.

4.1 Initial Lubrication

The slider rails (A), locking plungers (B) and release mechanism (C to F) should be well lubricated using a thin ISO22 inhibitor oil. **DO NOT USE GREASE** as it has a tendency to clog with road dirt/debris.

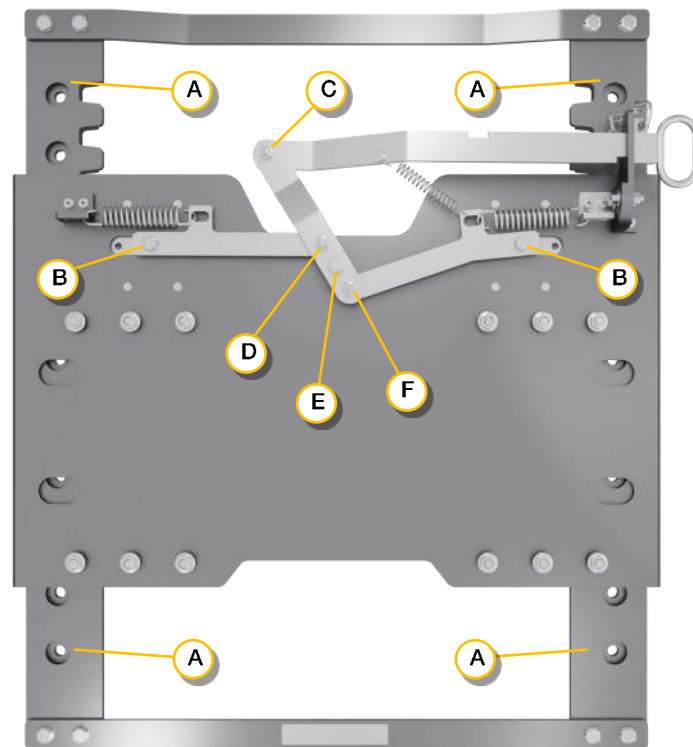
4.2 Initial Checks

Prior to going into operation;

- Check the torque on the following:

Fifth wheel mounting bolts, plunger housing bolts (both page 8) and slider rail to chassis bolts (OEM specific, see page 3).

- Open and close the slider locking mechanism to ensure the mechanism and safety chain are operational. (Refer to slider operating instructions section 3.1 of this booklet)



Lubrication points for the 170SF slider

SERVICING

4.3 Routine slider maintenance

- › Only use specified lubricants for the servicing work
- › The servicing work should only be completed by trained personnel.
- › Only use Original Equipment parts.

4.3.1 Every 5,000km (or 4-6 weeks)

- › Uncouple tractor, clean the sliding fifth wheel carriage, rails and mechanism. Inspect the slider for damage and defects.
- › Lubricate with clean oil, points A to F as shown on the previous page.

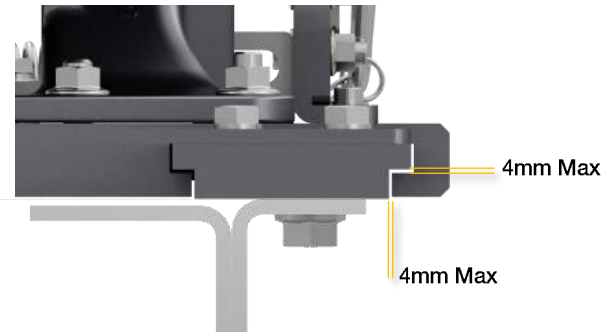
4.3.2 Every 25,000km (or 6 months)

- › Inspect the slider operation for function.
- › Ensure mechanism plungers and mating notches are clean and damage free.

4.3.3 Every 50,000km (or 12 months)

- › Degrease the sliding fifth wheel carriage, rails and mechanism.
- › Check the torque on the following:
Fifth wheel mounting bolts, plunger housing bolts (both page 8) and slider rail to chassis bolts (OEM specific, see page 3).
- › Open and close the locking mechanism to ensure that it is operational (Refer to slider operating instructions section 3.1 of this booklet).
- › Check that the mechanism return springs are correctly hooked.

- › Check that the safety chain is operational and replace if damaged.
- › Check the carriage for signs of cracks.
- › Check that the outer guides are within the carriage wear limits.



Limits of sideways movement between carriage and rails

- › Check the slider for wear. There should be a maximum of 5mm total horizontal movement between the carriage and the rails.



Limits of forward and rearward movement between carriage and rails

SERVICING

If the movement is less than 5mm, carry out the 10,000km maintenance procedure. If the movement is 5mm or more check the plunger, plunger housing and the slider rail for excessive wear. The plunger will require removing from the carriage to check the plunger housing dimension.

4.4 Slider spare parts and kits

Information on where to buy spare parts or for general queries, please contact your local distributor or visit the website; fontainefifthwheel.com

4.4.1 Replacing the locking plungers

If there is excess movement in the slider, move the slider to a different notch position if possible or replace the plungers.

4.4.2 Replacing the plunger housing and/or slider rails

To replace the slider rails and/or plunger housings the sliding carriage assembly should be removed from the chassis.

4.4.3 Torque settings for slider components

In the event that parts on the slider need to be torque checked, the following table details the required torque specific sized fasteners.

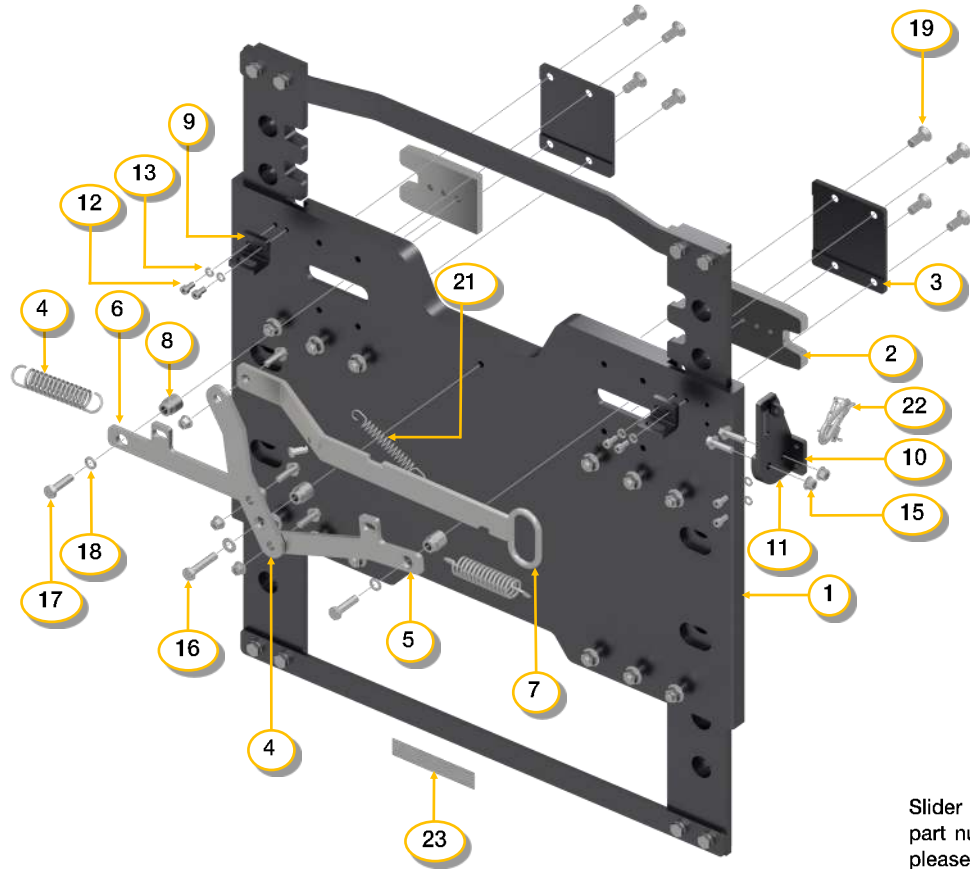
<i>FASTENERS</i>	<i>TORQUE (Nm)</i>
M16 G10.9	205 - 215
M14 G10.9	135 - 150
M12 G10.9	90 - 120
M10 G10.9	80 - 100
M8 G10.9	60

Fastener Requirements; Type, Grade and Torque

4.5 Product end of life

A fifth wheel's parts (and it's mounted option) can be categorised into metal, plastic and rubber. All plastic and rubber parts have material markings to aid with recycling. All components must be clean and free of any residual oil or grease prior to disposal. Please refer to your local authority's End-of-Life guidance and regulations.

SERVICING



4.6 170SF slider bill of materials

ITEM	QTY	DESCRIPTION	PART NO.
1	1	Sliding Carriage 170SF	59016241
2	2	Plunger 170SF	59016244
3	2	Plunger Housing 170SF	59016245
4	1	Lever 170SF	59016248
5	1	Linkage R.H 170SF	59016249
6	1	Linkage L.H 170SF	59016250
7	1	Handle 170SF	59016251
8	3	Spacer 170SF	59016252
9	2	Spring Eye 170SF	59016253
10	1	Handle Mounting Bracket 170SF	59016254
11	1	Handle Bracket 170SF	59016255
12	6	Bolt Cap HD M10x25	08206536
13	6	Washer M10	08206537
14	6	Bolt Flanged M12x40	08206538
15	6	Nut Flanged M12	08206539
16	1	Bolt Hex HD M14x70	08206540
17	2	Bolt Hex HD M14x50	08206541
18	3	Washer M14	08206542
19	8	Bolt Csk M14x35	08206543
20	2	Spring 170SF	59016256
21	1	Spring Handle 170SF	59016258
22	1	Safety Clip	59004114
23	1	Label Type Approval 170SF	59016259

Slider rails and spacer bars are OEM specific. These have part numbers stamped on them. If you have any doubts, please contact the Fontaine Technical Department.

WARRANTY

5. Terms of Warranty

The company (defined as MHT Europe) warrants that all Fontaine Fifth Wheels produced by the company will be free from defects in material and workmanship.

The warranty period for Fontaine products is:

3 years parts and labour

Or

500,000km (whichever comes first.)

All installations must be carried out in accordance with the company's Fifth Wheel mounting instructions.

These warranty terms cover failures in material and workmanship, but do not cover failures due to the following:

- › Vehicles which are not used in conjunction with the Fontaine application guide
- › Accidents
- › Incorrect installation (refer to Fontaine official mounting instructions)
- › General wear and tear
- › Misuse, alteration or neglect
- › Failure to properly maintain the Fifth Wheel using genuine Fontaine OEM parts (refer to Fontaine official maintenance instructions)

The company must be notified prior to the commencement of any repair. Failure to do this will cause automatic rejection of the claim.

In the event of a warranty claim, Fontaine must be notified so that a Customer Service (CS) number can be issued. Any parts not identified with a valid CS number will not be accepted as a return.





If a Fifth Wheel or component part is required to be returned to the manufacturing plant for examination, then these should be sent freight pre-paid by the claimant and be degreased prior to return.

Under the terms of the warranty the company agrees to replace the defective Fifth Wheel (or relevant parts at their discretion) and these will be supplied on a carriage paid UK or as agreed with the customer. Parts can only be replaced to cover possible warranty claims following the receipt of a valid order number. If the claim is rejected, an invoice will be raised by Fontaine for the replacement parts.

For agreed claims (up to a maximum of 1 hour), labour will be authorised to change the Fifth Wheel or component part at the company's prevailing warranty labour rate. Any invoices not identified with a valid CS number will not be accepted for payment. Fontaine reserve the right to reject any warranty claim it feels is not justified.

OTHER PRODUCTS

FONTAINE FIFTH WHEEL RANGE

RANGE	MATERIAL	USAGE	APPLICATION	IMPOSED (U) & D-VALUE T / kN	WEIGHT KG	HEIGHT OPTIONS MM (DIN 6)	LOW MAIN- TENANCE	SINGLE- POINT AUTOLUBE	AIR ACTIV- ATION	SINGLE SENSOR SAFETY CLIP	SENSOR SYSTEMS	HANDLE OPTIONS
150SP²	Pressed	Standard duty 2" on-road	 Fit for... Flexible haulage volume carriers using two and three-axle tractors	20T / 152kN	From 113kg	138 / 148 161 / 185 210 / 230 257	×	✓	✓	✓	✓	<ul style="list-style-type: none"> • Standard with safety clip • Extended with safety clip • Interlock
3000	Cast	Medium duty 2" on-road & limited off-road	 Fit for... Long-distance haulage with silo, tank and volume carriers using both two and three-axle tractors.	20T / 150kN	From 120kg	138 / 148 161 / 185 210 / 230 257	×	✓	✓	✓	✓	<ul style="list-style-type: none"> • Standard with safety clip • Extended with safety clip • Interlock
3000LM	Cast	Medium duty 2" on-road & limited off-road	 Fit for... Long-distance haulage with silo, tank and volume carriers using both two and three-axle tractors.	20T / 152kN	From 120kg	138 / 148 161 / 185 210 / 230 257	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> • Standard with safety clip • Extended with safety clip • Interlock
163CI	Cast	Heavy duty 2" on & off-road	 Fit for... HGV traffic and off-road terrain.	23T / 163kN	From 140kg	148 / 161 185 / 210 230 / 257	×	✓	✓	✓	✓	<ul style="list-style-type: none"> • Standard with safety clip • Extended with safety clip • Interlock

OTHER PRODUCTS

FONTAINE MOUNTING OPTIONS

RANGE	USAGE	APPLICATION	IMPOSED(U) & D-VALUE T / KN	WEIGHT KG	HEIGHT MM	AIR / MANUAL	SLIDE TRAVEL	150SP ²	3000	3000LM	163CI	RP59	RP90	FHD
SLIDING 150SF	Medium duty 2" on-road & limited off-road	 Fit for... Long-distance haulage with silo, tank and volume carriers using both two and three-axle tractors.	20T / 152kN	119kg	35mm	Air / Manual	Slide travel 525/750/ 900mm Two-position 300/525mm	✓	✓	✓	✓	✓	✓	✓
MOUNTING PLATE	Medium duty 2" on-road & limited off-road	 Fit for... Long-distance haulage with silo, tank and volume carriers using both two and three-axle tractors.	20T / 150kN	45kg / 50kg	22mm 40mm	—	—	✓	✓	✓	✓	✓	✓	✓
DIRECT MOUNT	Standard duty 2" on-road	 Fit for... Flexible haulage volume carriers using two and three-axle tractors.	20T / 150kN	40kg	140mm 160mm 200mm 230mm	—	—	✓	✓	✓	✓	×	×	×

General enquiries
+44 (0)1942 686 000
info@fontainefifthwheel.com
sales@fontainefifthwheel.com

UK aftermarket spares
+44 (0)1942 686 001

UK fleet sales
+44 (0)7880 791 252

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