EasiPump / EasiPoint
Installation & Maintenance Manual

TRACK MOUNTED, MECHANICAL, RAIL AND WHEEL FLANGE LUBRICATOR SYSTEM

Model Variants:

- 1 Blade System
- 2 Blade Systems
- EasiBlades
- EasiCheck Blades

Systems shown without reservoirs, (range of reservoirs available)

The EasiPump and EasiPoint systems are very similar. The difference is the pump plunger where the EasiPoint provides 40% of the pump output for the same plunger movement compared to the EasiPump.

EasiPoint Product	intended for switch rail lubrication on turnouts.
EasiPump Product	intended for running rail curve lubrication.

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Contents

1 General

- Health & Safety legislation requires that LubriCurve rail lubricators are fitted by trained personnel only; warranty will also be affected if un-trained teams work on the LubriCurve products. Whitmore Rail provide training courses.

  A general instruction sheet is included with each LubriCurve pump supplied, this Manual provides more complete information and should be used to support training provided by Whitmore Rail.

- This Instruction Manual is intended to be generic and concentrates on LubriCurve systems to suit Flat Bottom rail types.

- Only lubricator grease approved for use by Whitmore Rail can be used in the LubriCurve system. Use of other greases will invalidate warranty.

2 Product Transport / Storage

- Goods are packed and delivered to requested address in a form that is suitable for the product given good practice in the off-loading by the receiving company.

- LubriCurve 50 systems are delivered on the basis that they will be installed quickly.

- Systems are not intended for outside storage, equipment should be off loaded and stored inside a secure watertight building until required for installation.

3 Main Component Definitions

Reservoir	The reservoir is the cylindrical grease container that stores the grease. Internal springs and piston forces the grease into the lubricator pumps via feed hoses.
Non-Return Filling Valve	The non-return filling valve is fitted to the reservoir; this is where the grease is pumped into the reservoir (when fitted to the lubricator) via a suitable hand operated or motorised pump.
Feed Hose	This is the hose linking the reservoir to the pump inlet. The hose is secured using a hose clip at each end of the hose. The feed hose transfers the grease from the reservoir to the pump inlet.
Grease Inlet	This is part of the pipework that links the feed hose to the pump inlet.
Pump Unit	The pump unit consists of a pump body and is mounted to the rail by the rail clamp and pump support brackets.

Plunger Height Adjustment Screw	A special locking screw operated with a 2.5mm Allen key that is adjusted from the top of each pump body to adjust the height of the plunger. A pressure pad operates on the side of the adjuster screw. The higher the plunger in relation to the top of the rail the greater the grease output
Plunger Return Spring	The spring returns the plunger to its static position after the plunger has been depressed by the train wheel (or manually).
Pump Body	Pump contains: 1 plunger (complete with integral non return valve) 1 plunger height adjustment screw 1 plunger return spring 1 grease outlet non-return valve 1 bleed screw 1 delivery hose outlet pipe 1 pump support bracket. The grease is delivered from the reservoir via the feed hose and fills the primary chamber of the pump unit. When the system is primed the grease then fills the secondary chamber via the plunger integral non-return valve. Once the plunger is depressed by the train wheels, (or manually) the grease is transferred via the outlet non-return valve to the outlet pipe and then through to the delivery hoses. On the return stroke of the plunger its integral non-return valve opens and allows grease to flow into the secondary chamber from the primary chamber.
Grease Outlet non-Return Valve	The non-return valve acts as a stop valve, preventing the grease in the Blade path from being drawn back into the pump body as the plunger rises. Once the plunger is depressed by the train wheel, (or manually), the grease is transferred from the secondary chamber through the outlet non-return valve, permitting grease to flow through to the Blade via the delivery hoses.
Bleed Screw	Once open, any air trapped in the secondary chamber is able to be released when the plunger is operated or fully raised.
Delivery Hose	There is a specific length of delivery hose supplied with each lubricator, which has to be cut to fit between a pump body and a Blade assembly. The hose is secured using a hose clip at each end of the hose. The delivery hose transfers the grease from the pump outlet to the Blade inlet.
Blade (Grease Dispensing Unit)	The Blade has multiple ports at the top of the grooved plate, which allows the grease to be delivered to the gauge corner and/or gauge face of the rail for the train wheels to pick up and spread along the curve.

4 Site Preparation

- To install an EasiPump, the ballast has to be cleared to allow the reservoir to be seated correctly in a position, clear of the trains. There also needs to be sufficient clearance made in the ballast for the feed hoses and the rail clamps that secure the pump and the two Blades.

- The equipment needed for this work is:
    - A shovel or ballast fork whichever one is the most suitable.
    - All relevant P.P.E. needed to carry out the works safely.

- The lubrication systems outlined are heavy and care should be taken in general safe mechanical handling of the units to the install site. Two people should handle pump storage boxes and reservoirs, carry kits are available for the reservoir.

5 Preparation of Main Components for Installation

Application	Ensure the correct pump type has been selected for the application; part numbers and descriptions are included on each pump case.
Packing Case	Cases are delivered damage free and complete. Ensure the case has not been damaged during storage or transport to rail site, should the case be broken the contents should be carefully checked with reference to the contents list included within each pump packing case.
Pump Unit	Visually inspect for any casting defects that will affect its operation. Ensure that the pump unit brackets are not damaged. Ensure that the outlet non-return valve at the base of the pump body is fully tightened into each pump body. Ensure that the bleed screw is fully tightened. Ensure that the pump body has one grease outlet pipe attached. Ensure that the plunger is able to be depressed manually and returns freely.
Blade	Ensure that it is not bent or damaged and all ports are free from blockages. Ensure that all bolts are present and are fitted securely. Ensure that the hose inlet tails, which the delivery hoses attach to, are in place and are not damaged.
Rail Clamps	Ensure that both pump and Blade clamps are not damaged. Ensure that the threads on the hook bolts are not damaged.
Hoses (feed and delivery)	Ensure that the hoses are intact and free of holes and splits.
Reservoir	Visually inspect for any casting defects that will affect its operation. Ensure that all bolts are present and are fitted tightly. A non-return filling valve is fitted tightly and the internal ball is free moving.
Serial Numbers	Pumps and Reservoirs are supplied with unique serial numbers, these should be recorded prior to installation and recorded on installation record sheets as required

6 Installation

6.1 Single and Two Blade Systems

The basic EasiPump can be fed with grease from a range of spring pressure grease reservoirs. Similarly single or pairs of running rail or check rail blades can be fitted to the output.

The basic installation procedure steps are:

- Fit the EasiPump
- Fit the reservoir
- Fit the blades

This manual covers the basic principles required for pump and blades.

6.2 Fitting the Pump Rail Clamp, Flat Bottom Rail

6.2.1 Once the bed that the pump is to be fitted to has been identified, lay the pump unit on the ballast adjacent to the rail (on the cess side) and with the pump hinged away from the rail.

6.2.2 With the pump body loose and hinged away from the rail slide the rail clamp over the foot of the rail from the cess / field side.

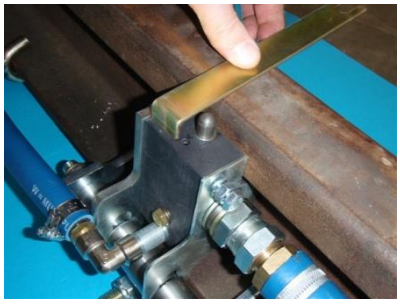
6.2.3 The hook bolt is fitted under the rail with the hook clasping on the foot of the rail on the 4’ side with the threaded part inserted through the hole at the base of the clamp.

6.2.4 The washers and nut are then fitted to the hook bolt and fastened tight, the flat washer and M16 Nyloc nut should be used.

6.2.5 Using the 1lb hammer strike the rail clamp on each upright lug to ensure it is fully bedded on the rail foot. Tighten all fasteners.

6.3 Fitting the Pump Unit

6.3.1 Rotate the pump in relation to the rail clamp and set the top of the pump body against the rail and 11mm below the crown of the head.



6.3.2 The pictures above show the requirement. Use the setting gauge LCS104-02 to achieve the required height.

6.3.3 If the pump needs to be lowered then tap the pump body down using the shaft of a hammer or strike the face of the left side support bracket.

DO NOT STRIKE THE ALUMINIUM PUMP BODY WITH A HAMMER AT ANY STAGE.

6.4 Fitting the Feed Hose and Reservoir

6.4.1 Slide the 25mm bore hose over the brass hose tail on the pump and secure with the hose clip provided. Tighten the hose clip.

6.4.2 Dig out the ballast so that the reservoir feed hose curves away from the EasiPump and clears the rail clip and sleeper without any kinks / restrictions to the hose.

6.4.3 Bury the reservoir at an angle and approx. half its depth to secure it in position, (see front cover picture).

6.4.4 Slide a feed hose clip over the open end of the feed hose and fit onto the angled pipe. Tighten the hose clip.

6.4.5 The feed hose may need to be cut due to the local conditions.

6.4.6 Position the reservoir into space dug in the ballast ensuring that there are no kinks in the feed hose.

6.5 Setting the Pump and Plunger Height

6.5.1 The height of the plunger is adjusted by first loosening the M8 lock screw on the side of the pump and then rotating the adjuster screw in the top of the pump.

6.5.2 Loosen the M8 locking screw nut and then turn the M8 hex screw a few turns, it is not necessary to remove.

6.5.3 Using a suitable gauge / measurement device and a 2.5mm Allen key, raise the plunger to the initial setting height of 0.5mm above the top of the rail. Note: subsequent adjustment is usually necessary to adjust grease output to suit local traffic / wheel pattern. The typical range will be between 0 and 1mm relative to crown of the rail head, in extreme cases it is also permissible to set below rail head where worn wheels are the cause of over greasing.

6.5.4 A setting gauge (Part No. LCS104-06) is available to allow this measurement to be accurate.

6.5.5 When the plunger height is correct tighten the pressure pad against the adjuster screw by retightening the locking screw lightly (do not over-tighten)

6.5.6 Should further adjustments be required then the procedure should be repeated having first loosened the pressure pad screw.

6.5.7 Ensure the plunger and adjusting screw cannot contact the passing train during this time.

6.6 Filling the System

6.6.1 Once the reservoir is fitted to the pump unit fill it up with grease:

1. Remove the filler dust cap and store it safely.
2. Attach a suitable drum pump to the 1" Snaplock filling point and secure locking arms in clamp position.
3. Operate the hand pump measuring piston depth periodically to ensure the reservoir is not overfilled. On Whitmore Rail products the following measurements are applicable.

Standard Reservoir (LCS102-01) from the reservoir back plate to the rear most surface of the piston; see Installation Manual Section 7.1 and 7.2.

Full is 80mm
Empty is 280mm

Small Reservoir (LCS102-30) from the reservoir back plate to the rear most surface of the piston; see Installation Manual Section 7.1 and 7.2.

Full is 50mm
Empty is 200mm

IMPORTANT NOTE: Do not overfill the reservoir

4. Remove the hand pump and replace the reservoir dust cap.

6.7 Air Lock / Bleeding

6.7.1 Once the reservoir is full, open the bleed screw (do not remove) until grease flows from the screw. If necessary operate the plungers until grease starts flowing.

6.7.2 Once the grease is flowing hold down the plunger fully and close the bleed screw, this process prevents air from being drawn back into the system.

Note: A reservoir spider (Part No. LCS102-04) should be available at this stage should it be necessary to lock the reservoir piston back, if the hose or coupling need to be removed for any reason.

6.8 Test the Pumping System

6.8.1 Using a 10mm "T" bar or other suitable tool depress the plunger (not completely down) until the grease flows from the outlet pipe.

IMPORTANT NOTE: Do not strike the plunger with a hammer at any stage.

6.9 Installing EasiBlades

6.9.1 EasiBlades are supplied as complete single units. From the 4' / Gage and midway between Sleepers / Ties slide the base (W bracket) over the rail foot as shown. Locate the hook bolt around the opposite side of the foot and tighten the single Nyloc nut. Fully bed the base onto the rail using a hammer on the vertical faces of the 'W' bracket. Retighten the Nyloc nut.

6.9.2 The blades are provided in left and right hand forms; the difference being the direction the hose tail points, the correct layout is shown in the adjacent picture, outer pairs with hose tails pointing towards each other.

6.9.3 Tilt the blade up so that the blade tip is towards the rail head and as high as possible, lightly tighten the two pivot bolts.

6.9.4 Decide the required blade height and tap the steel lugs on the blade down using a hammer to achieve the required height. The setting gauge described previously should be used to verify heights.

6.9.5 There may be a slight gap between the tip of the blade and the rail. To close this gap tap the corner of the lug as necessary, do not hammer the blade itself.
Note: Strike the bracket to angle the blade as shown on the red arrow.

6.9.6 Repeat the process for each EasiBlade.

6.10 Installing Check Rail Blades in place of Blades

The procedure is similar to the standard Blade installation on the high rail. The procedure outlined covers Bull Head and 113, 109, 110 Flat Bottom Check Rail. After completing this Section, proceed from Section 6.11 as filling and priming principals are the same for Check Rail blades and Blades.

Bull Head Check Rail (Figure 1)

Flat Bottom Check / Restraining Rail (Figure 2)

U69 / UIC33 Check / Restraining Rail (Figure 3)

6.10.1 Fit the rail clamps to the Check Rail generally following procedures outlined in the previous sections. The Blade fixing studs on the clamps should be oriented towards the 4', clamp spacing to suit the check rail blades and the full assembly located midway between the sleepers.

6.10.2 Locate the Check Rail assembly on the two rail clamp studs and tighten the two M16 fasteners securely.

6.10.3 The blade has vertical and horizontal adjustment through setting of the M16 fastenings on the support bracket. Arrange the blade so that the exit ports are between 1 and 2mm from the Check Rail face and the blade is horizontal, lock securely in that position.

6.11 Fitting the Delivery Hoses

6.11.1 Fit one end of a delivery hose to the hose tail inlet on the Blade with a hose clip and measure the other end of the hose to the grease outlet tail of the pump body, cut the hose and secure it with a hose clip. Ensure that the hose runs under the rails.

6.11.2 Repeat the procedure for the other hose.

6.12 Fill the Hoses and Blades

6.12.1 Using the 10mm "T" bar keep depressing one of the plungers until grease appears onto the top of the Blade. Do not fully depress plunger, maintain a minimum 1mm clearance with the pump body.

6.12.2 Repeat for the other Blade.

7 Routine Maintenance

Prior to any maintenance it is necessary to have the following data.

- The date that the lubricator was last maintained.
- The final depth of the reservoir piston when the lubricator was last maintained.
- The plunger height when the lubricator was last maintained.
- Any works that were carried out when the lubricator was last maintained that could change the grease output.
- Any work that was identified but not carried out on the previous visit.

7.1 Measuring the Reservoir

7.1.1 This measurement is the only true guide to how much grease the lubricator has used since it was last visited. It is necessary to have the previous recordings of the last inspection, this will enable you to make judgements and carry out corrective action if needed without any guesswork.

7.1.2 Using a ruler, insert it into the centre hole in the front cover of the reservoir, making sure that the side of the ruler is touching against the side of the hole and that the ruler is at the same angle of the reservoir (See Figure 4).

7.1.3 When the ruler stops at the rear most face of the piston, check exactly the measurement (in millimetres) against the face of the front cover at the centre hole.

Figure 4

7.1.4 Record this measurement and compare it to the data that you have brought to site.

7.1.5 By subtracting the final measurement recorded from the last time the lubricator was maintained from the measurement you have recorded this time would give you the grease used in millimetres.

7.1.6 The type of lubricator, its installation and rail traffic will determine the volume of grease used since the lubricator was last maintained. Figure 4 shows Whitmore Rail reservoir (Part No. LCS102-01) where 1mm of piston displacement equates to 0.12kg of grease.

7.1.7 However do not make any alterations at this stage, as other reasons for incorrect grease outputs may be the cause.

7.2 Checking for Leaks

7.2.1 The lubricator should be checked for leaks. With some leaks it will be necessary to take the leak into consideration in regards to the grease output that was registered.

7.2.2 Leaks on the primary side (i.e. feed hoses or inlet assembly) of the lubricator will cause an increase in grease output that is not due to the settings of the lubricator.

7.2.3 Tighten any hose clips or nuts / bolts / screws that might be the cause of the leak and / or replace the faulty part that is causing the leak.

7.3 Cleaning the Lubricator and Surrounding Site

7.3.1 It is at this stage that the lubricator must be cleaned. The reasons are that when the checks are made, you will be able to register measurements and assess the operations of the lubricator accurately and carry out the works in a cleaner environment. The reason why the lubricator must not be cleaned before this stage, is that once it is clean, you will have removed evidence of the leak.

7.3.2 The whole of the lubricator must be cleaned thoroughly.

7.3.3 The site must be cleared of excess grease.

7.3.4 If oil absorbent granules are being used, the existing, soiled granules should be removed and replaced with fresh granules. This must be done with extreme caution, if the granules are allowed to get into the lubricator system via the filling valve, the system may become blocked or worse the non-return valve can be held open.

7.3.5 The surrounding rail chairs and clips, all rails in the immediate vicinity and the insulator pots need to be cleaned. The 3rd and 4th rail are required to be cleaned to ensure they are free of grease and dirt, this is to avoid causing a fire risk and hazardous under footing.

7.3.6 Do not attempt to clean live traction current rails with the current switched on.

7.4 Measuring the Plunger Height

7.4.1 This section is for the initial measurements of the plunger height. The height to be measured is the distance between the levels of the top of the plunger head, and the crown of the rail.

7.4.2 The plunger heights must be measured and recorded. The plunger height must be measured to the nearest 0.25 of a millimetre.

7.4.3 If the lubricator has not used the amount of grease that is required as expected since the last time that it was maintained.

7.4.4 Check that the plunger height is the same as when the lubricator was last maintained.

7.4.5 You may find that the plunger height has changed due to loose bolts on the pump unit bracket causing the pump unit to move, check the bolts and tighten if necessary. If necessary reset the plunger height once all the other checks have been carried out.

7.4.6 If the plunger height is lower than previously although the bolts are all tight, check that the plunger has not become flat, if so change them, also the plunger may be stuck down due to defective springs, this will be detected by the plunger operation test later in this Manual.

7.4.7 If the plunger height has been reset on this visit record the new height.

Note: If the plunger is being raised, it should only be raised by 0.25mm at a time and must be inspected on the following shift. However, if the plunger height is known to have dropped they may be reset to their original height, but a follow up inspection must still be made on the following shift. The Plunger height should be adjusted up (to increase grease output) or down (to decrease grease output), to suit local traffic / wheel pattern.

7.5 Checking for Airlocks

7.5.1 The following shows steps taken to check for airlocks.

- Remove the delivery hose from the pump outlet.
- Using the 10mm "T" bar, depress the plunger downwards several times.
- If the plunger has no resistance, and / or there is no grease flow, the pump is probably air locked.
- Record the results.
- If the test was not satisfactory, clear the air lock. The easiest method is by loosening the air bleed screw until the groove on the threaded section is exposed. Using the 10mm "T" bar, depress the plungers downwards several times; do not exceed the permissible plunger travel.
- Record the results.
- If the attempt to clear the airlock was not satisfactory check that there is a grease flow from the reservoir.

7.5.2 Air locks that are present on arrival at the lubricator will give you certain information into why the lubricator has not had a sufficient grease output.

7.5.3 If the lubricator has not used any or enough grease required for that particular lubricator but air locks are present, plunger must not be raised, as due to the air locks, the lubricator would have not been working.

7.5.4 If the lubricator has not used any grease, but no air locks are present other corrective actions should be undertaken.

7.6 Checking for Defective Plunger and Plunger Spring

7.6.1 The operation test of this section should be made into two parts:

- Firstly, by using the pump pliers, grip the plunger and move the plunger up and down to ensure that there is no free movement of the plunger or plunger return spring.
- The second test is using the 10mm "T" bar to depress the plunger. Ensure that the return of the plunger is not too slow and in addition check that it's returning fully after every depression. **IMPORTANT NOTE: Do not fully depress plunger to avoid damage**.
- Record the results of the test.
- If the test is not satisfactory then the plunger and / or plunger return spring should be changed.

7.7 Checking for a Defective Outlet Non-return Valve

7.7.1 If the grease is flowing onto the spreader bar or out of the pump body outlet ports, when the delivery hoses are removed, without the plungers being struck, the non-return valve may be defective.

7.7.2 If the non-return valve is found to be defective, the valve cannot be repaired and a new valve is not available the lubricator must be temporarily locked off, if this is not done, excessive grease will migrate onto the head of the rail.

7.8 Inspection of the Blades

7.8.1 Visually check the Blades for damage and / or wear.

7.8.2 Check that the fastenings are secure.

7.8.3 Depress the plunger, using the 10mm "T" bar and ensure all of the ports on the top face of the spreader bar are dispersing grease. This will show if there is hardened grease, inside the Blade and/or if the Blade slots are blocked. Do not fully depress plunger to avoid damage.

7.8.4 Record your findings and any works carried out.

7.9 Filling the Reservoir

7.9.1 Ensure that the non-return filling valve is clean, place the filling pump nozzle over the non-return filling valve on the reservoir and pump the handle.

7.9.2 Do not overfill the reservoir.

7.9.3 Record the final reservoir measurements.

7.10 Periodic Replacement of Components

7.10.1 It is recommended that various system items are replaced periodically; exchange will be dependent on traffic frequency and should be monitored during maintenance visits but as a minimum should include the following.

	Exchange Frequency
Pump	
Springs	2 years
Plunger	2 years
Fasteners	5 years
Hose	
Blade and Reservoir Hose	2years
Reservoir	
Seals	5 years
Springs	5 years
Filler Valves	5 years

8 Parts List

Contact Whitmore Rail for advice / availability

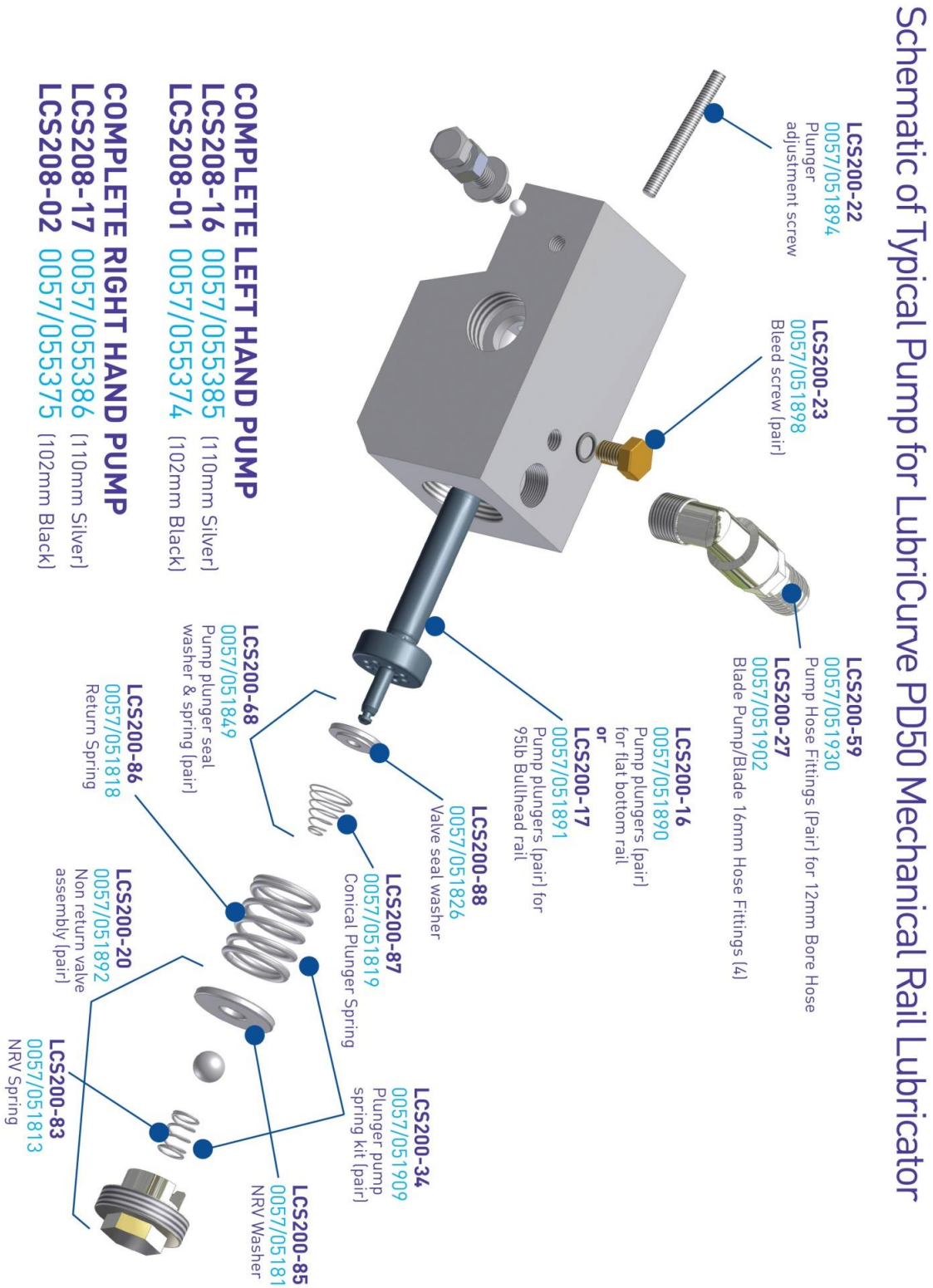
9 Basic Installation Tool Kit

A selection of hand tools are suggested to correctly fit and maintain the pumps, specific recommended Whitmore Rail products are referenced above.

T Handled 2.5mm Allen Key
Ratchet Handle 1/2" Drive
Combination Spanner 24mm
Combination Spanner 13mm
Combination Spanner $1^{5}/_{16}$"
Socket 7mm 3/8" drive
Socket 13mm 1/2" drive
Socket 24mm 1/2" drive
Socket Long Reach 24mm 1/2" drive
Ball Pein 1lb Hammer
Junior Hacksaw and Blades
Screwdriver 6" x 1/4" flat blade, flared tip
Folding Rule (wood or plastic)
Tool Bag

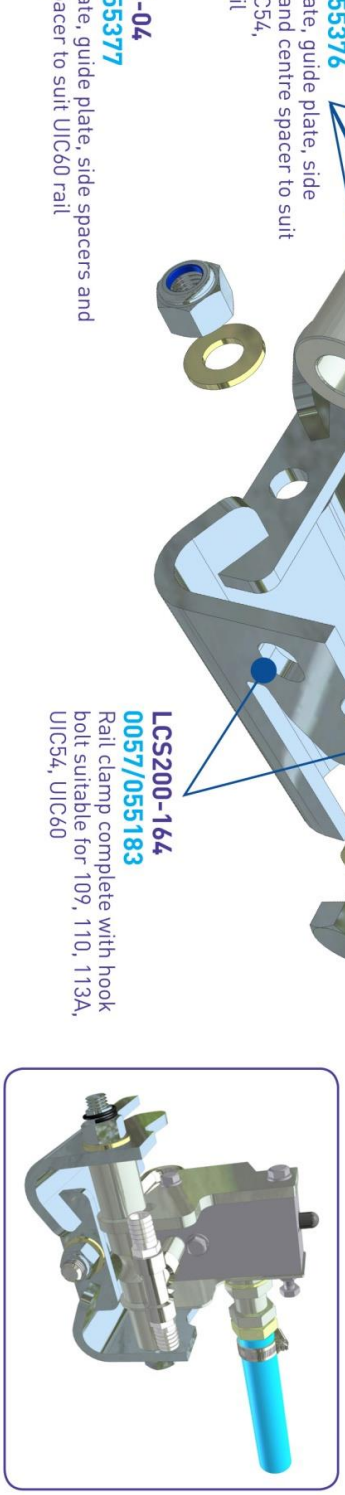
10 Exploded Views of System Elements

10.1 EasiPump Schematic



Schematic of QHi EasiPump twin blade option mechanical rail lubricator

LCS208-12 0057/055381
Easipump twin outlet option for 113A, UIC54, UIC56 rail
LCS208-13 0057/055382
Easipump twin outlet option for UIC60 rail



LCS208-14
0057/055383
Twin hose outlet

LCS208-03
0057/055376
Fixing plate, guide plate, side spacers and centre spacer to suit 113A, UIC54, UIC56 rail

LCS208-04
0057/055377
Fixing plate, guide plate, side spacers and centre spacer to suit UIC60 rail

LCS200-164
0057/055183
Rail clamp complete with hook bolt suitable for 109, 110, 113A, UIC54, UIC60

LCS208-01 **0057/055374**
102mm left hand pump body
LCS208-02 **0057/055375**
102mm right hand pump body

LCS208-05
0057/055378
Inlet assembly for diameter 25 reservoir hose

LCS200-133
0057/055245
Standard rail clamp hook

LCS200-214
Hose and fittings

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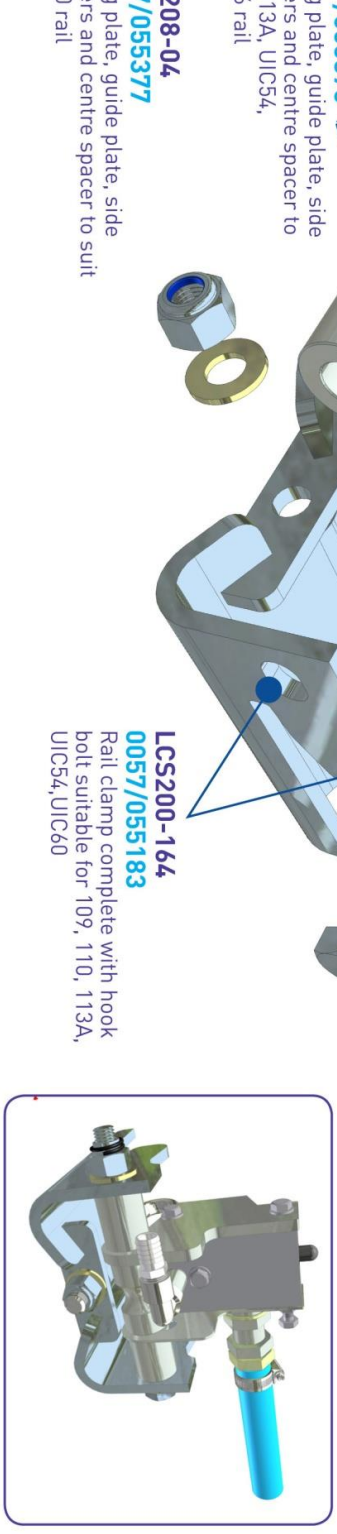
An ISO 9001 and ISO 14001 registered company registration no. 7678917

Schematic of QHi EasiPump single blade option

LCS208-10 0057/055381
Easipump single outlet option for 113A, UIC54, UIC56 rail
LCS208-11 0057/055382
Easipump single outlet option for UIC60 rail



LCS208-15
0057/055383
Single hose outlet

LCS208-03
0057/055376
Fixing plate, guide plate, side spacers and centre spacer to suit 113A, UIC54, UIC56 rail

LCS208-04
0057/055377
Fixing plate, guide plate, side spacers and centre spacer to suit UIC60 rail

LCS200-164
0057/055183
Rail clamp complete with hook bolt suitable for 109, 110, 113A, UIC54,UIC60

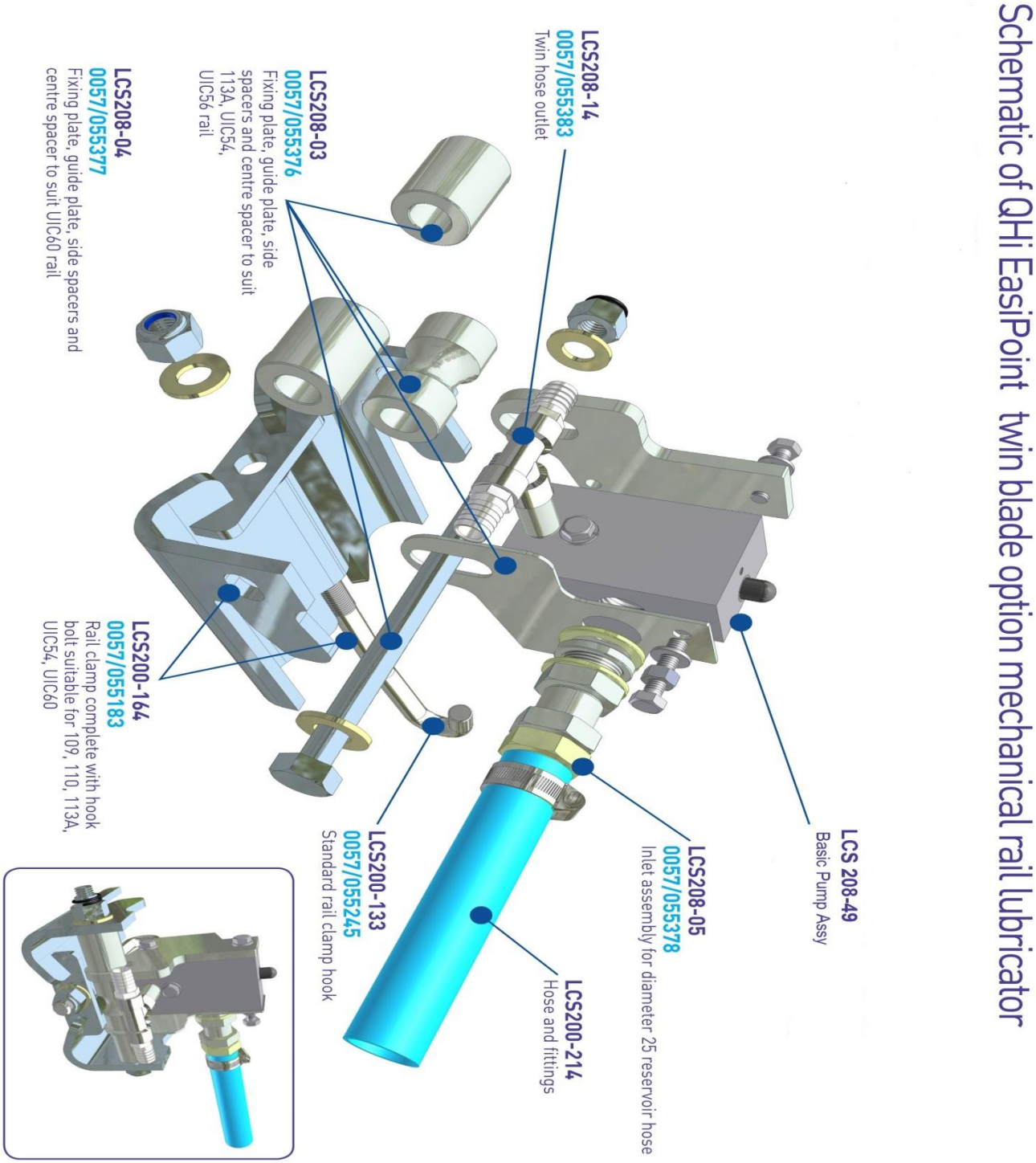
LCS200-133
0057/055245
Standard rail clamp hook

LCS208-05
0057/055378
Inlet assembly for diameter 25 reservoir hose

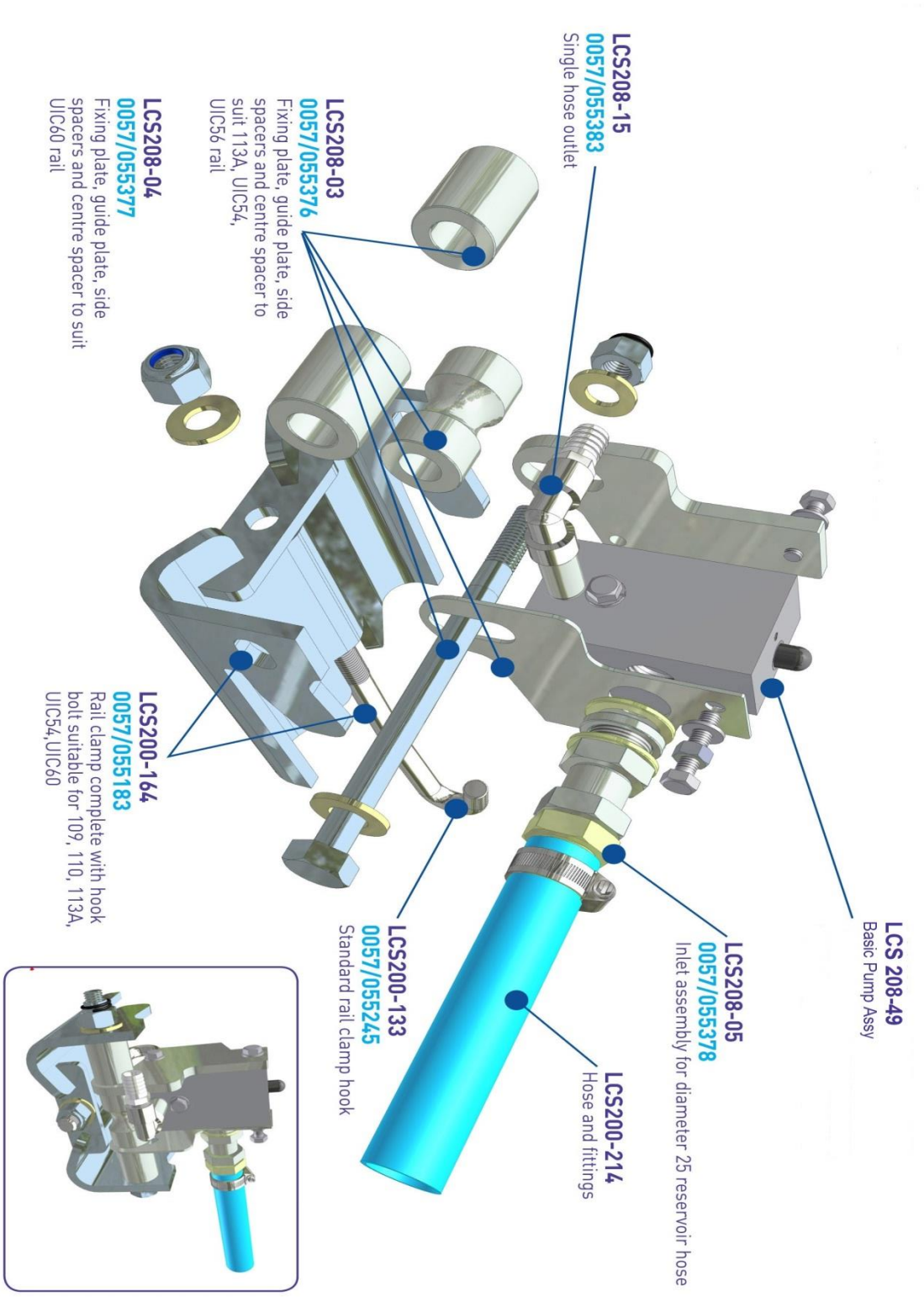
LCS200-214
Hose and fittings

LCS208-01 0057/055374
102mm left hand pump body
LCS208-02 0057/055375
102mm right hand pump body

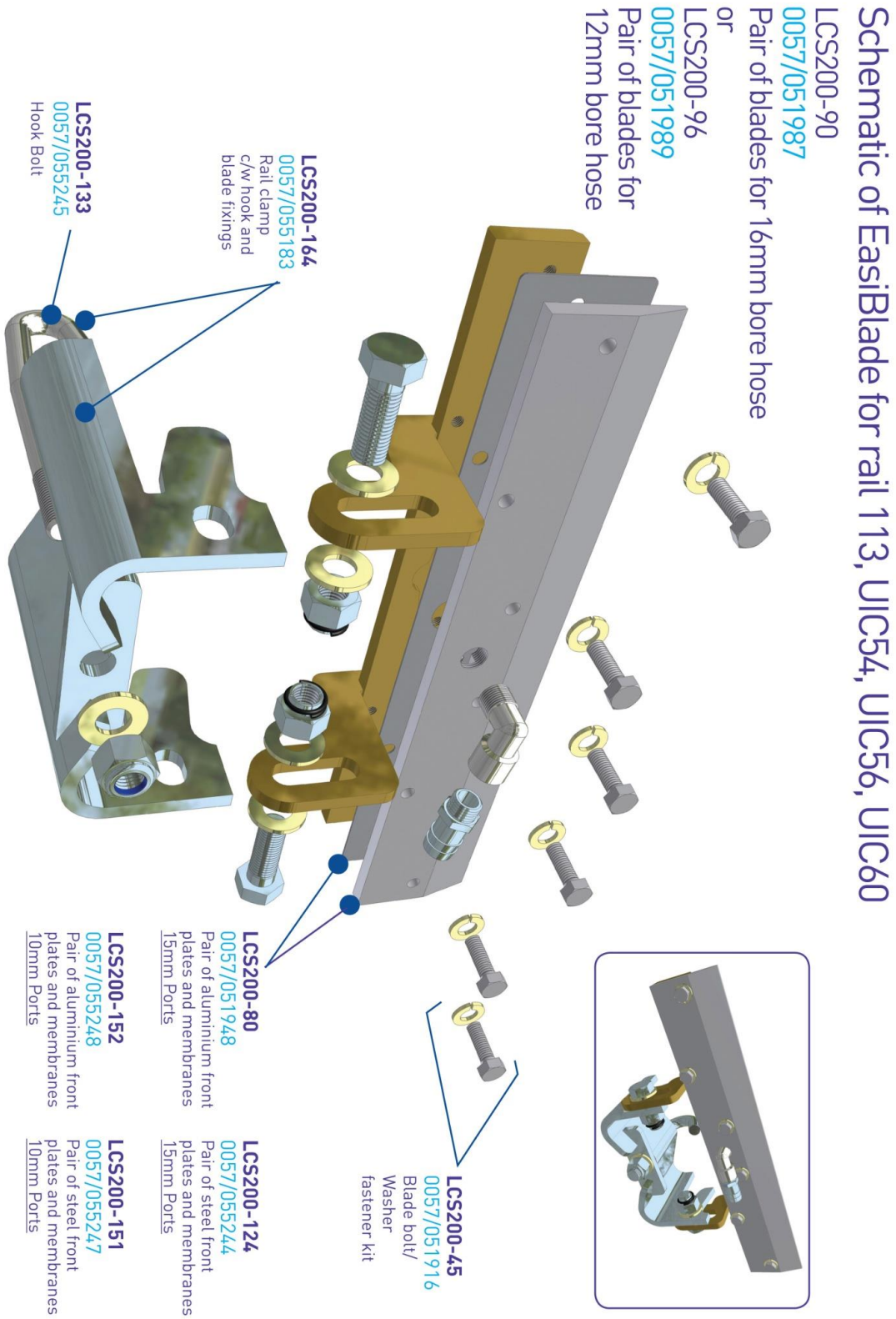
10.2 EasiPoint Schematic



Schematic of QHi EasiPoint single blade option



10.3 Blades


Schematic of EasiBlade for rail 113, UIC54, UIC56, UIC60
LCS200-90
0057/051987
Pair of blades for 16mm bore hose
or
LCS200-96
0057/051989
Pair of blades for
12mm bore hose
LCS200-164
0057/055183
Rail clamp
c/w hook and
blade fixings
LCS200-133
0057/055245
Hook Bolt
LCS200-80
0057/051948
Pair of aluminium front
plates and membranes
15mm Ports
LCS200-152
0057/055248
Pair of aluminium front
plates and membranes
10mm Ports
LCS200-124
0057/055244
Pair of steel front
plates and membranes
15mm Ports
LCS200-151
0057/055247
Pair of steel front
plates and membranes
10mm Ports
LCS200-45
0057/051916
Blade bolt/
Washer
fastener kit

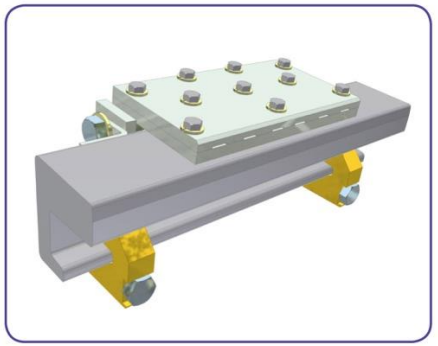
Schematic of QHi EasiCheck rail blades (Pair)

LCS200-11 0057/051887
Flat bottom running rail / bull head check rail

LCS200-14 0057/051888
Bull head running rail / bull head check rail

LCS200-53 0057/051924
Flat bottom running rail / UIC33 check rail

LCS200-61 0057/051285
Flat bottom running rail / flat bottom check rail



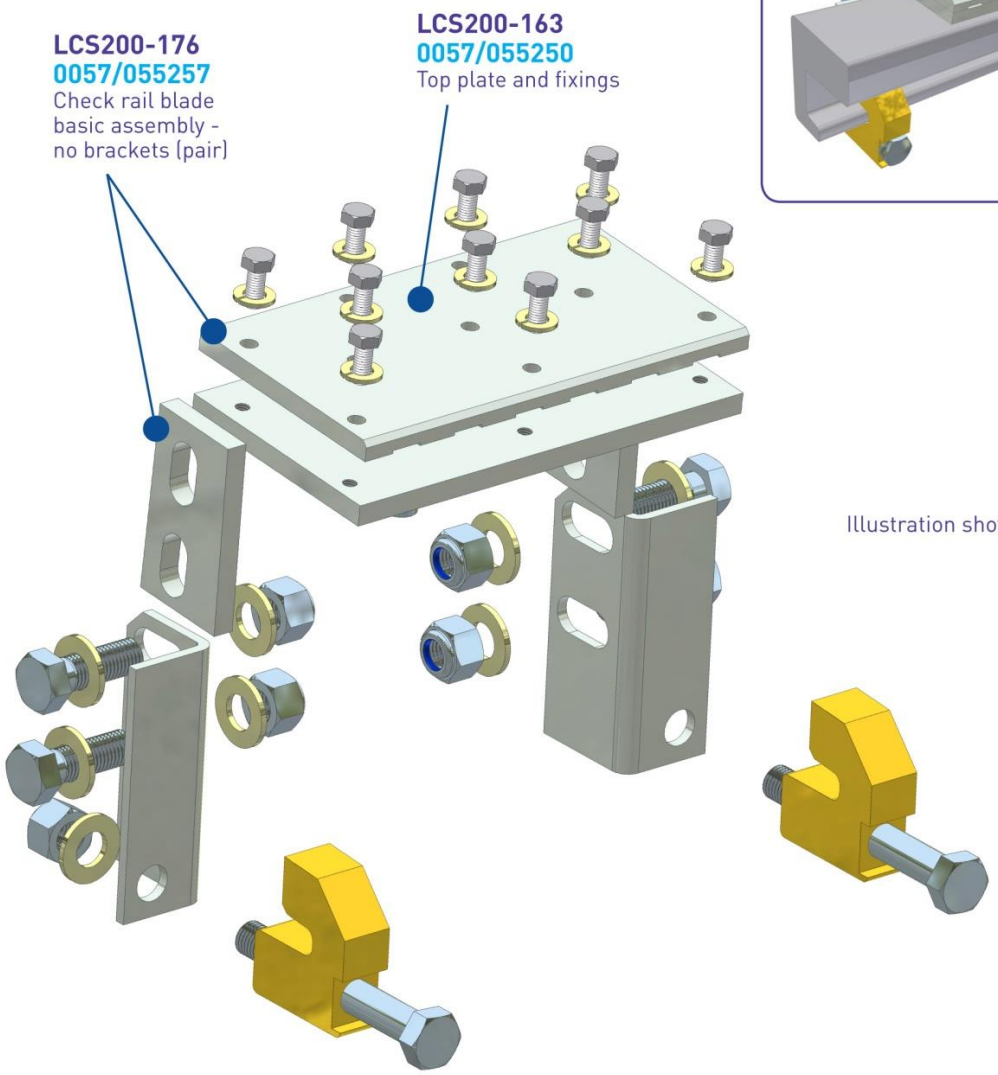


Illustration shows UIC33 option

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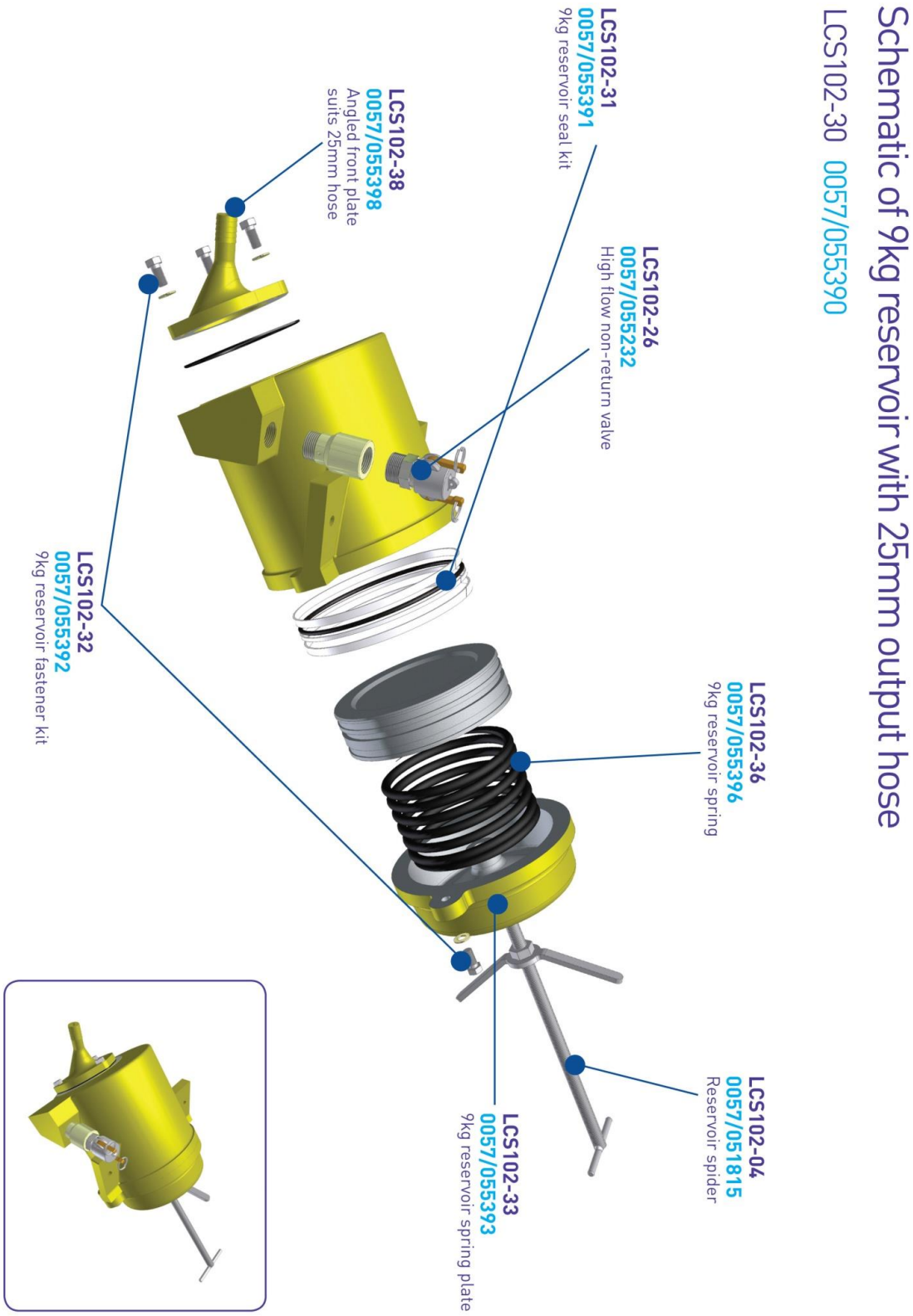
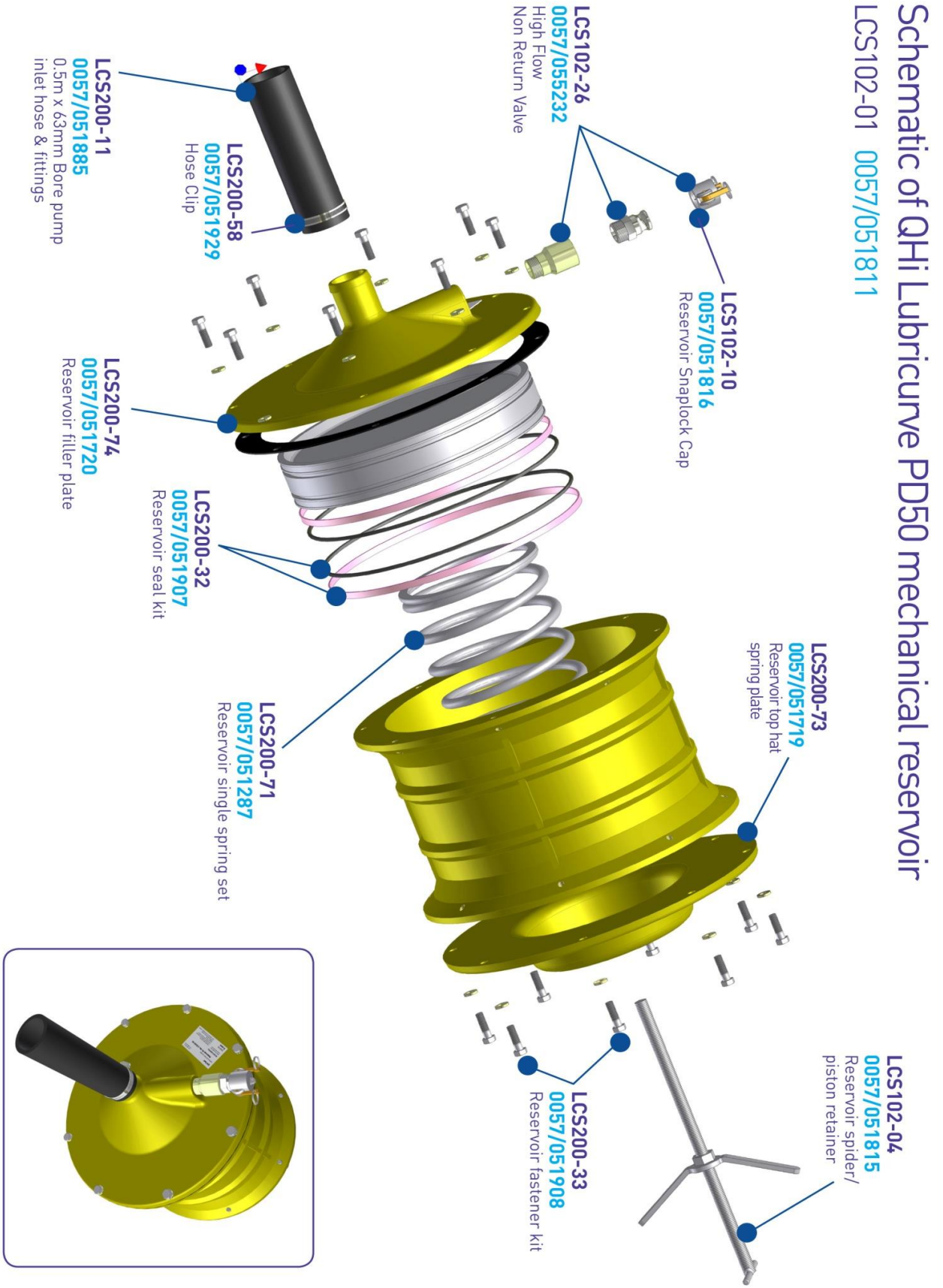
10.4 Reservoirs



Schematic of QHi Lubricurve PD50 mechanical reservoir

LCS102-01 0057/051811



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EC Declaration of Conformity

In accordance with EN ISO 17050-1:2004

We Whitmore Europe Limited

of City Park
Watchmead
Welwyn Garden City
Hertfordshire AL7 1LT

in accordance with the following Directive(s):
2006/42/EC The Machinery Directive

Hereby declare that:
Equipment LubriCurve, Track Mounted, Mechanical, Rail & Wheel Flange Lubricator System and accessories.

Model number LCS101, 100, 102, 112, 200, 208, 209 Series Lubricators

is in conformity with the applicable requirements of the following documents

Ref. No.	Title	Edition/date
ISO 9001	Quality Management System Requirements	2008
ISO14001	Environmental Management System	2004

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications and is in accordance with the requirements of the Directive providing the Lubricator has been installed in accordance with Whitmore Europe's Installation & Maintenance Manual

Signed by:

Name: Craig Foster

Position: Managing Director

Whitmore Europe Ltd., Welwyn Garden City AL7 1LT

On 05th February 2017

The technical documentation for the machinery is available from:
Name: Operations Director
Address: Whitmore Europe Ltd., Welwyn Garden City AL7 1LT

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