



# PTO - Power Take Off

## Power Take Off

TRT stock a full range of PTO (power take off) solutions from Hydreco Powauto.

Designed to suit all applications, makes and models. Not all PTO options are shown below.

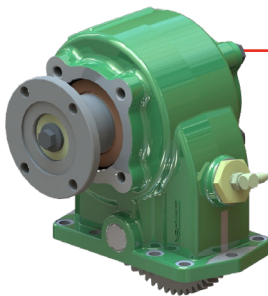
For your SOMETHING applications please contact one of our branches.



### PA850/851/852 Series

Designed for transmissions with an SAE 8 bolt opening.  
With heavy duty bearing for high capacity output.

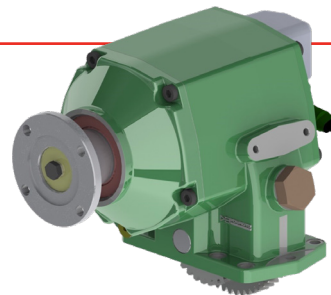
**To suit:** Eaton Fuller, Mack transmissions.



### PA28 Series

Low ratio, extra heavy-duty side mounted constant drive.

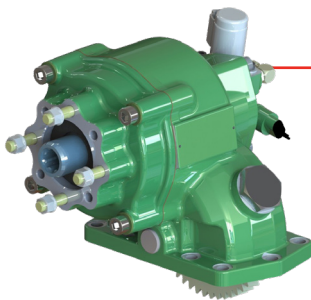
**To suit:** Allison 3000, 4000 transmissions.



### PA38 Series

Low ratio, extra heavy-duty side mounted hot shift for 10 bolt transmissions.

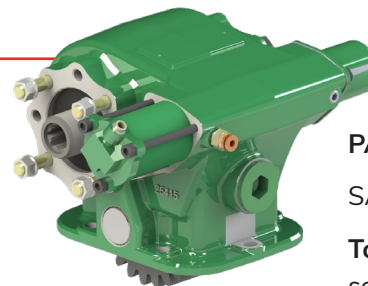
**To suit:** Allison MD and HD Series transmissions.



### PA41 Series

Low ratio, extra heavy-duty side mounted hot shift for vehicles with a narrow chassis e.g. Hino and Isuzu.

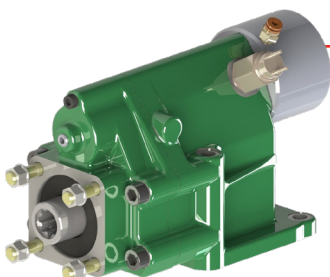
**To Suit:** Allison MD and HD Series transmissions.



### PA78 Series

SAE 6 bolt side mounted.

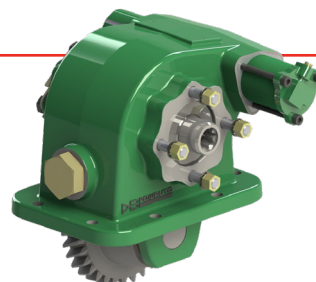
**To Suit:** Eaton FS/FSO series transmissions.



### PA368 Series

Heavy-duty 6 bolt side mounted. Operated by air or vacuum.

**To suit:** Daihatsu, Ford, Hino Isuzu, Mazda, and Toyota transmissions.



### PA371 Series

8 bolt deep rich side mounted.

**To suit:** certain Isuzu and MLD transmissions.

*...for the long haul*

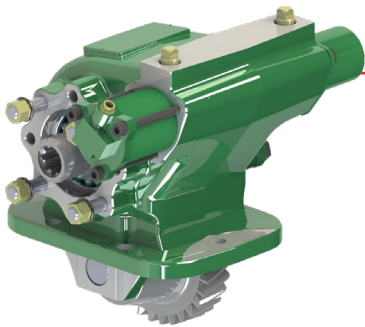


# PTO

## Power Take Off

TRT stock a full range of PTO (power take off) solutions from Hydreco Powauto.

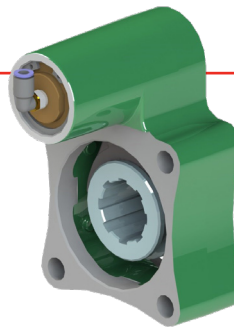
Designed to suit all applications, makes and models. Not all PTO options are shown below.  
For your SOMETHING applications please contact one of our branches.



### PA393 Series

Heavy-duty 6 bolt side mounted.

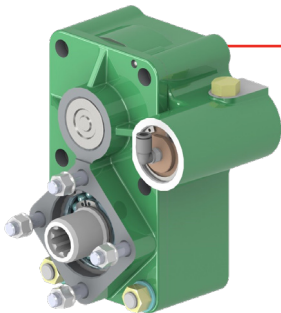
**To suit:** Mitsubishi Fuso transmissions M036S5, M038S5, M038S6.



### PAB139 Series

4 bolt rear of countershaft.

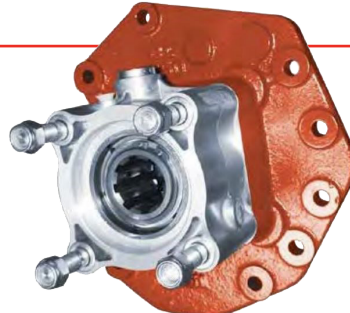
**To suit:** ZF and Volvo transmissions.



### PB 145 Series

Rear mount, commonly used in European trucks.

**To suit:** Iveco, ZF and Volvo transmissions.



### PA 451 Series

Rear mount PTO for Mercedes Benz.

**To suit:** Mercedes Benz G131, G210, G211, G231, G240, G241, G260, G280, G281, G330



### PB 464 | 465 Series

Rear mount PTO for Scania.

**To suit:** Scania GRS905 and GRSO905.

## TRT TIP

Inspect mounting positions and hose connection for oil leaks on a regular basis to prevent pump failure.

...for the long haul



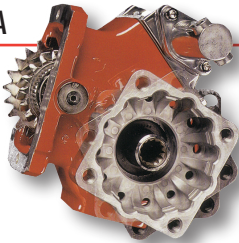
# PTO

## PTO

TRT carry a range of PTO's from Chelsea, PZB, Hydrocar and OFMB.

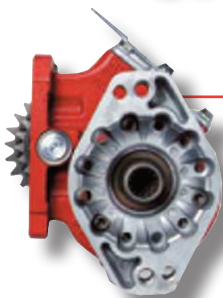
Not all PTO options are shown below. If you don't see what you need below get in touch.

### CHELSEA



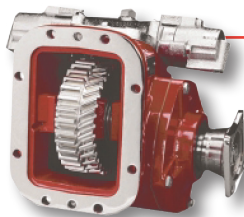
#### 442 Series - 8 Bolt

Torque (Nm/ft lb)	650/480	Output shaft rotation	Opposite
Power (Kw/hp)@1000rpm	68.1/91.4	Engagement types	Air, Elec/Air Cable/Constant mesh



#### 489 Series - 8 Bolt

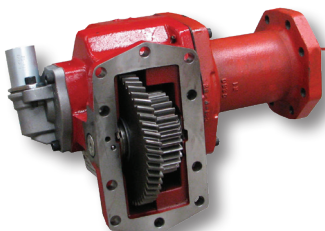
Torque (Nm/ft lb)	300/255	Output shaft rotation	Opposite
Power (Kw/hp)@1000rpm	32/42.8	Engagement types	Air, Elec/Air Cable/Constant mesh



#### 880 Series

SAE 8 Bolt. Std output shaft 1 1/4" 10spl w/1410 flange

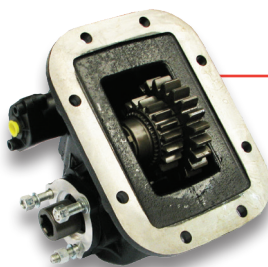
Torque (Nm/ft lb)	up to 675/500	Output shaft rotation	Opposite
Power (Kw/hp)@1000rpm	70/94	Engagement types	Air/Elec Cable/Constant mesh



#### 278 Series - H/Duty Series

10 Bolt mounting Allison

Torque (Nm/ft lb)	300/407	Output shaft rotation	Engine
Power (Kw/hp)	57/43	Engagement types	Hyd, Remote Hyd Elec, Air Elec o/speed



#### 004 Series

SAE 8 Bolt transmission, Fuller etc. Suit most 3 Bolt 6 spline pump mount.

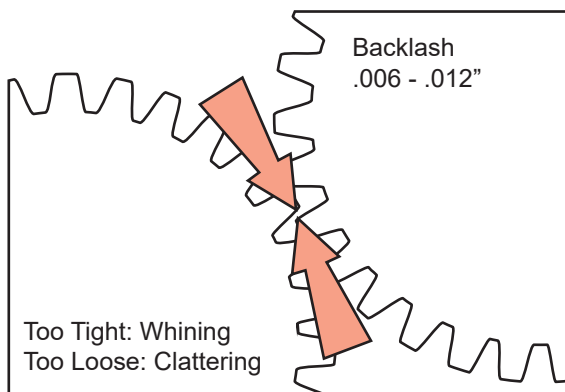
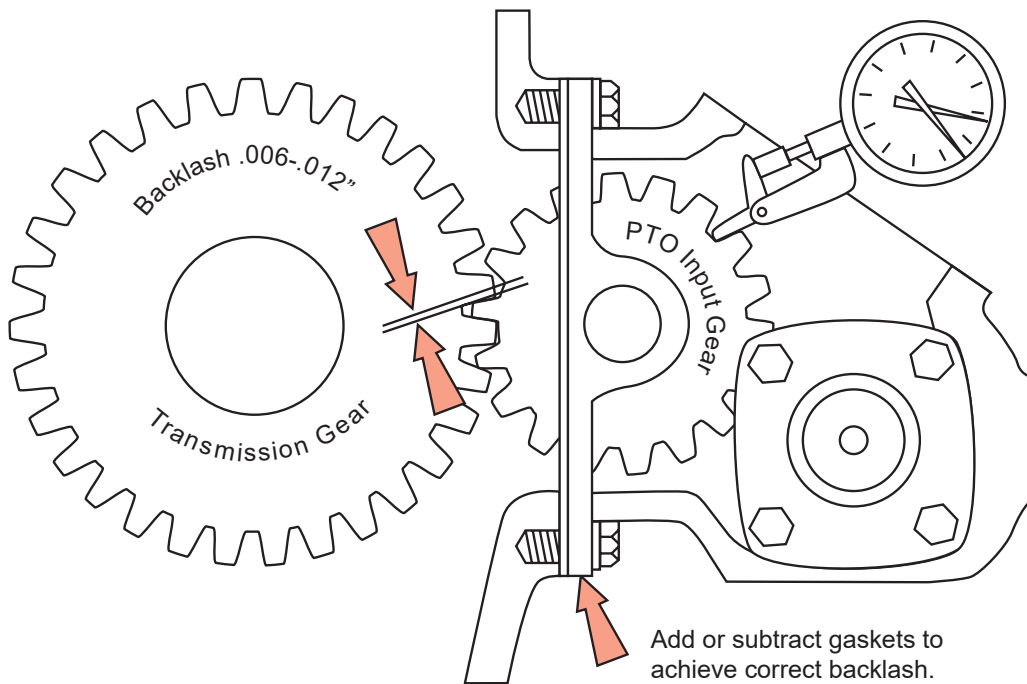
Torque (Nm/ft lb)	184/250	Output shaft rotation	Opposite
Power (Kw/hp)	25kgm	Engagement types	Air, Cable Elec/Air

*...for the long haul*



# PTO Installation

## PTO INSTALLATION



Backlash is necessary to allow gears to mesh adequately and without undue stress between the gears.

Without the correct backlash (.006" - .012") excessive tooth loading will damage the gears, either from too tight a fit 'whining', or from too loose 'clattering'. Backlash (B) is the shortest distance between non-mating surfaces of adjacent teeth in mating gears.

### Torque required for tightening bolts/nuts

- 6 Bolt Cast Iron Housings = 35 – 40 Nm
- 6 Bolt Aluminium housings = 35 – 40 Nm
- 8 Bolt Housings = 60 – 65 Nm

### NOTE:

These notes are a guide only always refer to the manufacturers instructions.

*...for the long haul*

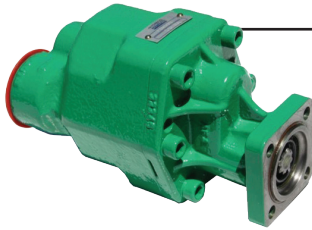




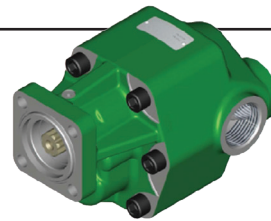
# Pump

## Powerauto Mount Gear Pumps

For high pressure and flow applications. Ideal for cranes, load lifter and compactor applications.



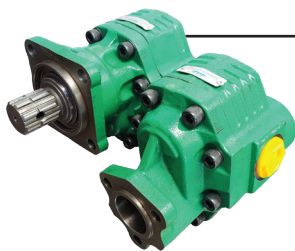
POW



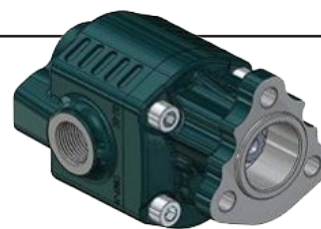
PUA

## ISO/DIN and UNI Mounts

For moderate to high-pressure flows. Ideal for cranes, access equipment and tippers.



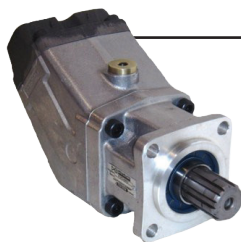
T Series



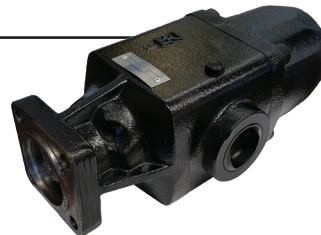
T Uni  
Bidirectional Mount

## Piston Pumps

Suited to applications requiring high pressure with confined spaces and available in Powauto ISO mount configurations.

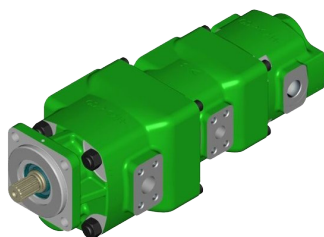


BENT Axis



Axial

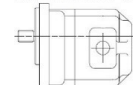
## Hydraulic Gear Pumps



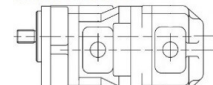
### Q Series

High pressure up to 280 BAR.  
This is a modular design that can be assembled in a number of different configurations.  
This also allows for different housing frame sizes.

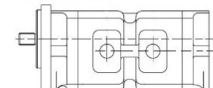
SINGLE PUMPS



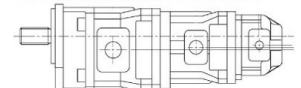
DOUBLE PUMPS



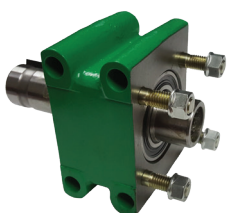
DUAL PUMPS



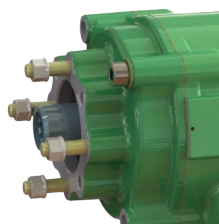
TRIPLE AND QUADRUPLE PUMPS



## Remote Mounts, Pumps, Shafts and Flanges



Remote Mounts  
and Adapting



08 Powauto



1310 - 1410  
Flange



13-SAE B



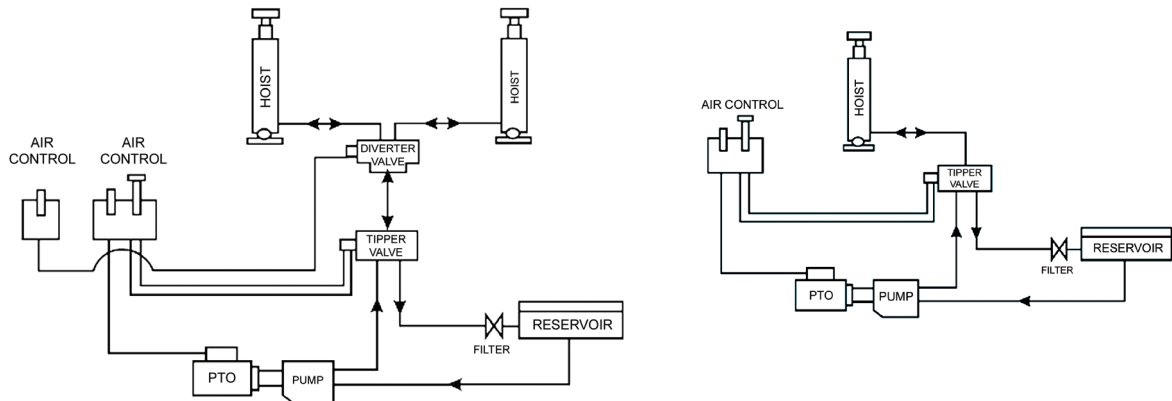
ISO/DIN

*...for the long haul*

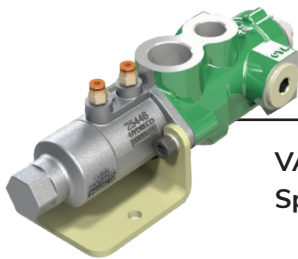


# Valves

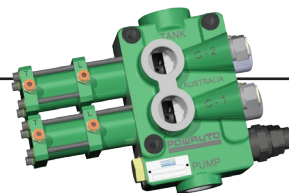
## Valves



A basic truck and trailer tipper hydraulic schematic, using a single spool valve, and 2 position diverter.



**VA84 Single Spool Valve**



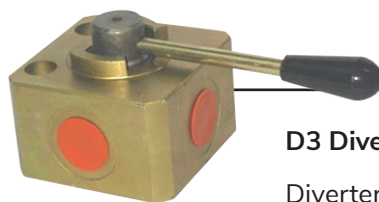
**VA210 Truck and Trailer Valves**



**VA86 Diverter Valve**



**D3V 3/4**



**D3V-IHP**

### D3 Diverter valves

Diverter valves provides a low cost alternative to an air operated truck hydraulic system.



### Tank Valve Assembly

Tanks come complete and are ready to bolt directly on to trucks.

Two capacity options:

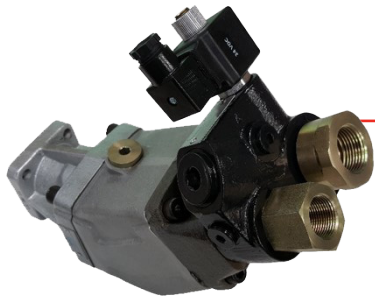
- 15L
- 30L

*...for the long haul*



# Valves

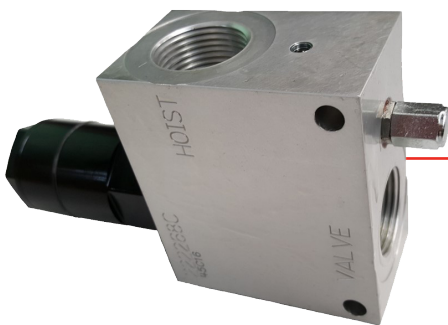
## Valves



**Bypass Valves**  
VABP Series



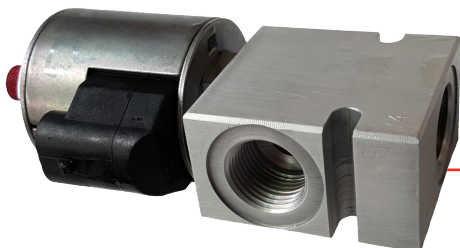
**End of Stroke Valves**  
UBESV Series



### Hose Burst Valves – 73148-A

This is an in line safety valve that prevents the lowering of the tipper body if a hose ruptures, with a manual override for maximum safety. Ideal for crane winch and tipper trailer applications.

Also used in load holding applications.



### Load Hold Valve

- SV 10
- SV 16

Screw in hydraulic valve for blocking or load holding in applications that require low internal leakage. This has reliable operation in mobile machinery.



### Q Series Mobile Hydraulic Valve

The Q series range has been designed by Hydreco for demanding mobile hydraulic requirements.

The Monoblock valve with its cast iron body provides high-pressure flows and is available in a wide range of spool and operator options.

*...for the long haul*



# Controls

## Air Operated Control Kits

TRT have a full range of air operated control kits available, please contact us if the right air control system is not shown for your application. The compact designs are ideal for modern cabs.



CK98 ABC



CK113



CK114



CK90



CK94A

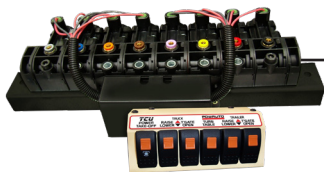


CK96

## Electro Pneumatic Controls

To reduce the need to plumb air lines through the cab a range of electric over air remote controls are available in both hard wired and wireless form.

TCU control kits are available as a pre-packaged system for easy installation.



CK158

Manual Switch Control with compact switch bank for PTO, hoists, tailgate locks and turntable lock.



CK167

Universal installation for a truck and trailer tipping system with programmable functionality.



CK170

Universal installation for a truck and trailer tipping system with a confined space.

*...for the long haul*





# Hoists

## Underbody Hoists



For payloads up to 28 tonnes.

- 3-6 stages available
- 76-166mm options available

Designed to suit rear, side or 3 way tipping applications.

## Well Mount Hoists

For payloads up to 28 tonnes.

- 3-5 stages available
- 129-190mm options available
- Standard mounting
- Low closed heights



WHERE PIVOT CENTRES & STROKE ARE KNOWN USE FORMULAE

$$\frac{\text{STROKE}}{\text{PIVOT CENTRES}} \times 59 = \text{ANGLE OF TIP}$$

WHERE PIVOT CENTRES & ANGLE OF TIP ARE KNOWN USE FORMULAE

$$40^\circ \text{ ANGLE} = \text{PIVOT CENTRES} \times 0.68 = \text{HOIST STROKE}$$

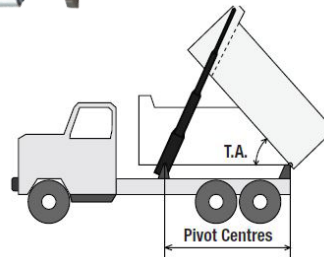
$$45^\circ \text{ ANGLE} = \text{PIVOT CENTRES} \times 0.76 = \text{HOIST STROKE}$$

$$48^\circ \text{ ANGLE} = \text{PIVOT CENTRES} \times 0.82 = \text{HOIST STROKE}$$

$$50^\circ \text{ ANGLE} = \text{PIVOT CENTRES} \times 0.84 = \text{HOIST STROKE}$$

$$52^\circ \text{ ANGLE} = \text{PIVOT CENTRES} \times 0.87 = \text{HOIST STROKE}$$

$$55^\circ \text{ ANGLE} = \text{PIVOT CENTRES} \times 0.92 = \text{HOIST STROKE}$$



### PIVOT CENTRES

- A. The pivot and hoist pivot are on the same horizontal plane.
- B. The hoist is vertical when closed.

## Remanufactured hoists and hoist rebuilds

We are parts and service agents for other popular hoists, and repair all brands, stocking parts for most popular models.

- Hydreco
- Mailhot
- Roc
- Edbro
- Delta
- Penta
- Hyva
- Hidromas®
- ITP



Our factory designed test bench allows our technicians to dismantle and rebuild all hydraulic hoists under ideal conditions.



*...for the long haul*





# Hydraulic Tanks

## Hydraulic Tanks

Hydraulic tank options from Hydreco are available in a range of capacities and dimensions.

- Brackets and straps provided
- Fitted with breather, sight glass and filter
- Steel or alloy options available



Side of Chassis Hydraulic Oil Tanks

Round Side of Chassis Hydraulic Oil Tanks

Over Chassis Hydraulic Oil Tanks

## DCBU DC Power Units



- Single acting and double acting options available
- 12V or 24 V
- Built in check valve
- Sealed pendant control
- 3, 5, 7, 10, 16, and 20L options

Note: made for intermittent use only – 10% of 10 mins

## DBP Series Hydraulic Couplings



### Couplings

Coupler Body ¾"	QANV-F12
Coupler Tip ¾"	QANV-M12
Coupler Body 1"	QANV-F16
Coupler Tip 1"	QANV-M16

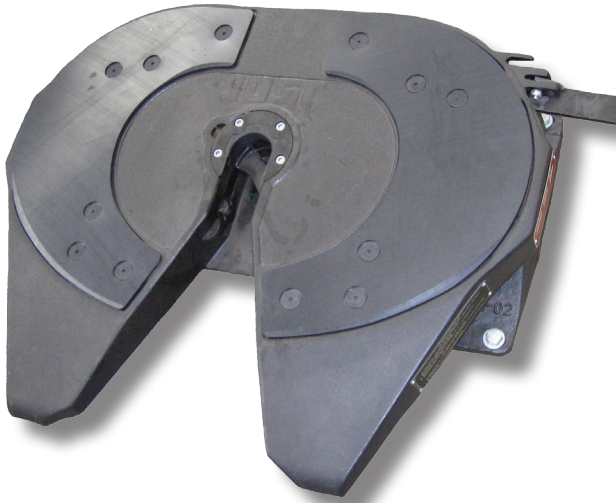
Also available with ISO standard and flat face mounts.

...for the long haul



# Jost 37

## 37C+ 37CW MODELS



50mm/2" Couplings  
Rubber mounting  
Cast Steel Top Plate

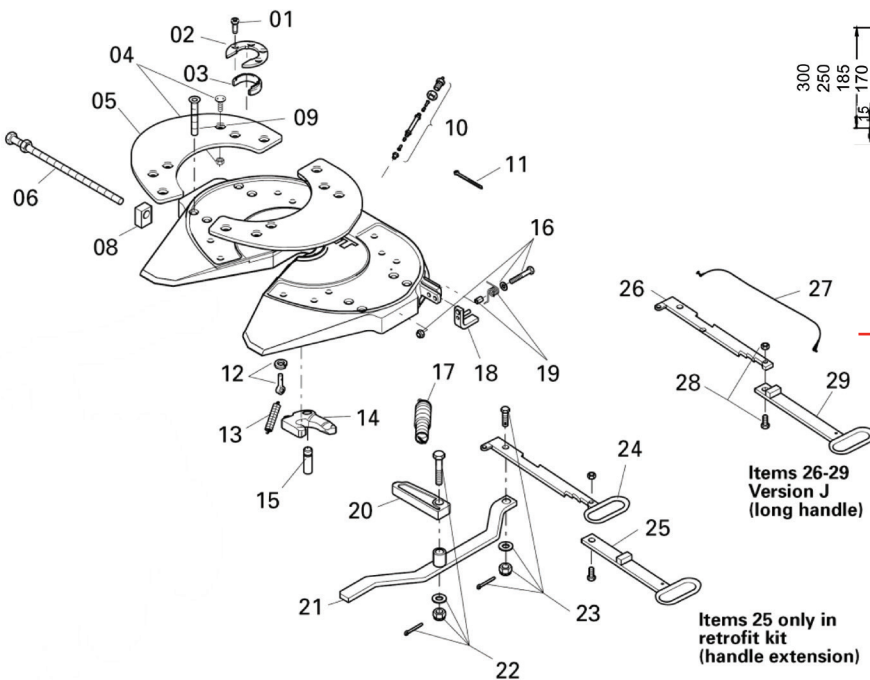
### Applications:

Tanker  
General freight  
Stock crate  
Fridge van  
B-double  
Road train

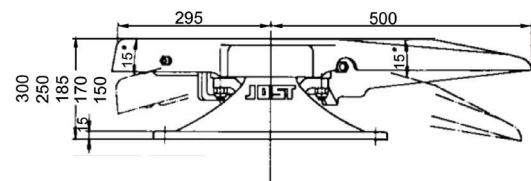
Also in 37 Series 37E range for light duty applications

### Weld-In Feet

37 Series Jost Fifth Wheels are available with either **weld-in** or **bolt-in** mounting feet.

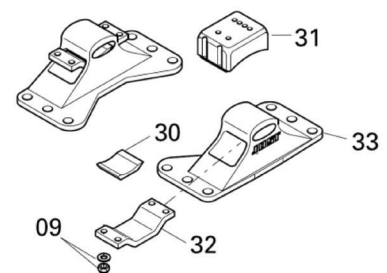


Item 2 Mounting Ring  
3 Bolt = 37C  
4 bolt = 37E

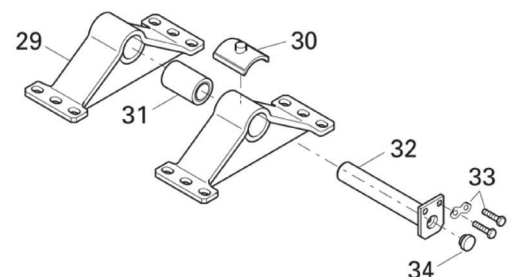


'W' Maintenance Free Version Shown

### 37C Mounting Trunions & Components



### 37E Mounting Trunions & Components



...for the long haul

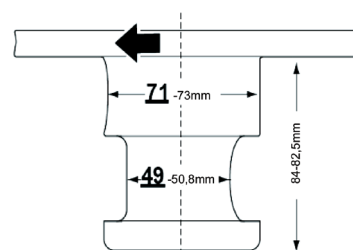
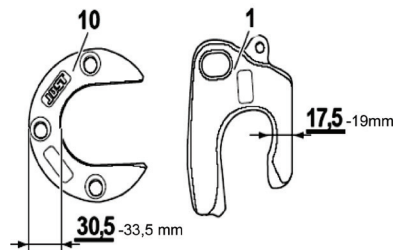
## 37 Series Maintenance

Uncouple at short intervals (5,000km).

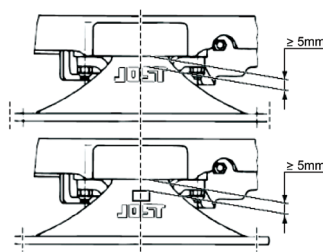
Clean semi-trailer skid plate and fifth wheel plate. Lubricate fifth wheel plate, locking mechanism and king pin with high pressure grease (e.g. BP EP 2).

The bearings of types C, D, and E are maintenance free.

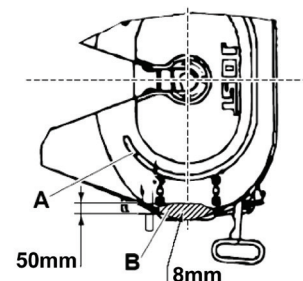
## Wear Limits



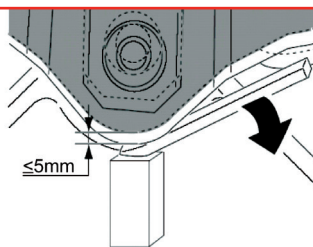
When the wear limit has been reached the affected components must be replaced.



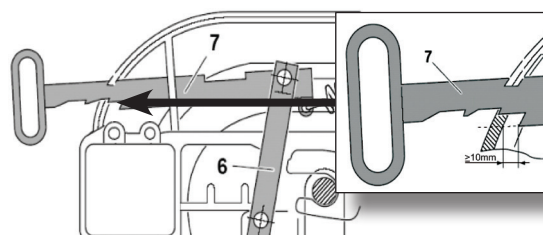
Version C must have a minimum gap of 5mm under load.



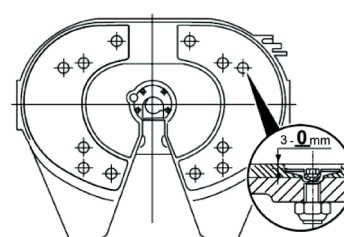
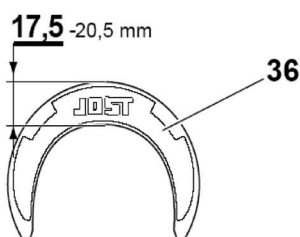
The fifth wheel coupling must be replaced. If the flat top surface is worn to the depth of the lubrication groove (A).



Version E may have maximum play of 5mm. To check this raise the skid plate with a crow bar.



When the fifth wheel coupling has been locked correctly, the distance between the safety edge and the inner edge of the plate must be at least 10mm.

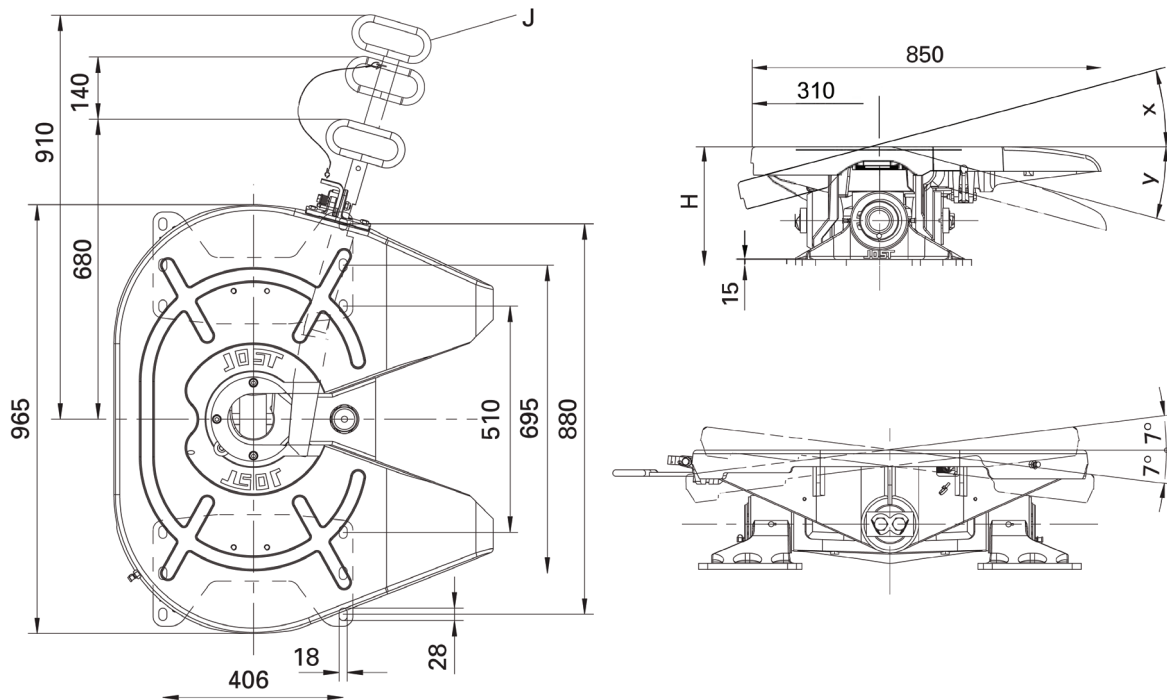


For W models the wear limit of the liners is reached when they have worn down to the top of the securing bolts.



# Jost 38

## Heavy Duty Fifth Wheel Coupling JSK 38G



### Selection table / Versions available

Model	H	Lock	Pitching angle		D value	Imposed	Weight
	(mm)		X	Y	(kN)	Load U (t)	(kg)
JSK 38G-1	290	3 ½"	15°	15°	260	36	265
	290	3 ½"	15°	15°	260	36	265
	290	3 ½"	15°	15°	260	36	265
	290	3 ½"	15°	15°	260	36	265
JSK 38G-1 2"	290	2"	15°	15°	170	28	265
	290	2"	15°	15°	170	28	265
	290	2"	15°	15°	170	28	265
	290	2"	15°	15°	170	28	265

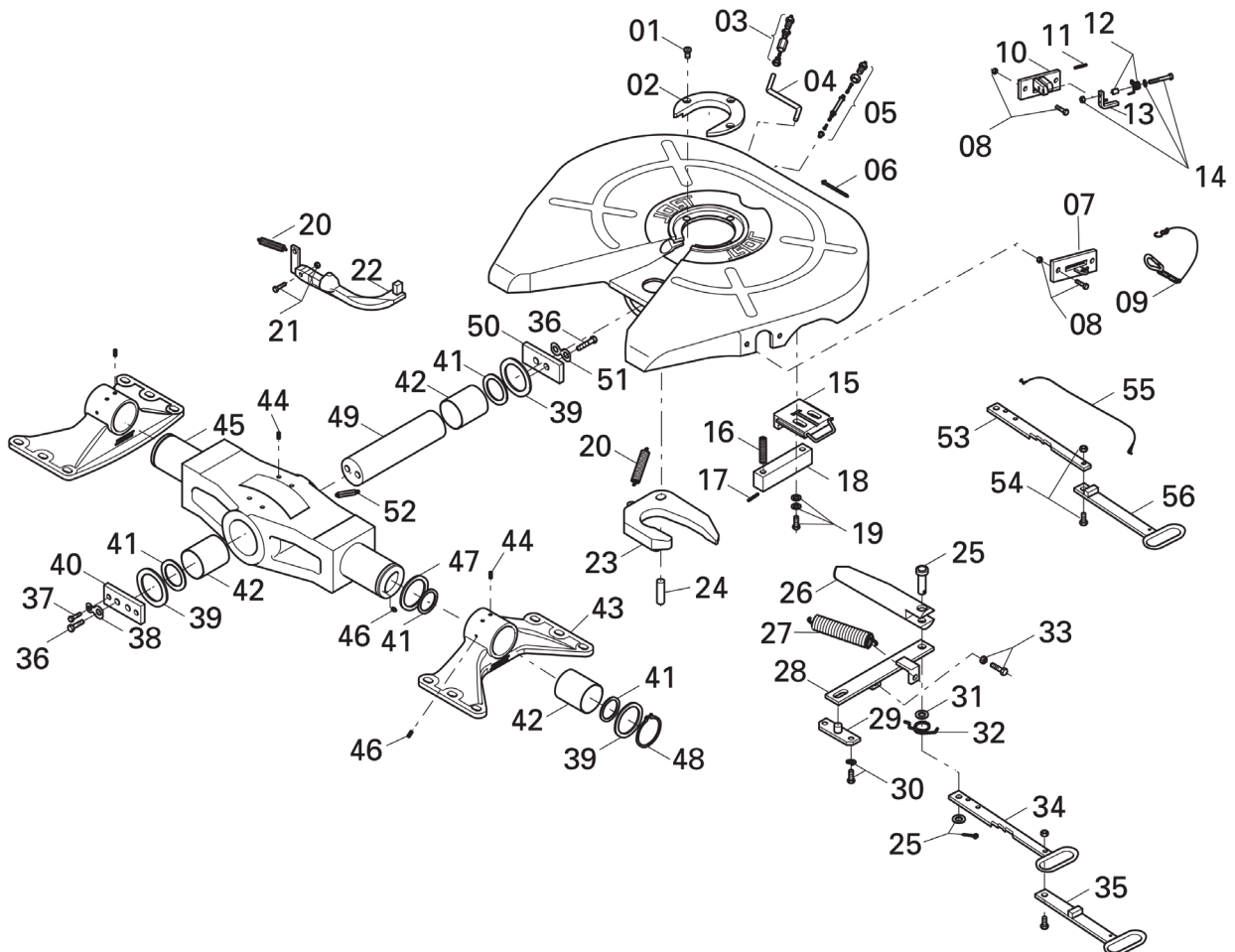


...for the long haul

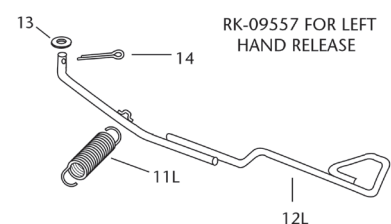
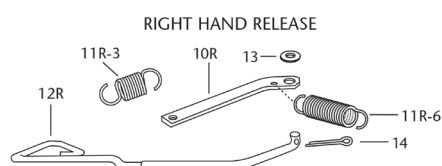


# Jost 38

## Jost 38G Parts



Part Number	Item	Description
SK2421-76	01, 02, (05), 09, 20, 23, 24, 27	Repair kit for lock 3 1/2"
SK2421-77	01, 02, (05), 09, 20, 23, 24, 27	Repair kit for lock 2"
SK2521-76	36, 37, 38, 41, 42, 44, 46, 51, 52,	Repair kit for bearing
SK2421-98	01, 02, 20, 23	Conversion kit from 3 1/2" to 2" lock
SK2421-99	01, 02, 20, 23	Conversion kit from 2" to 3 1/2" lock



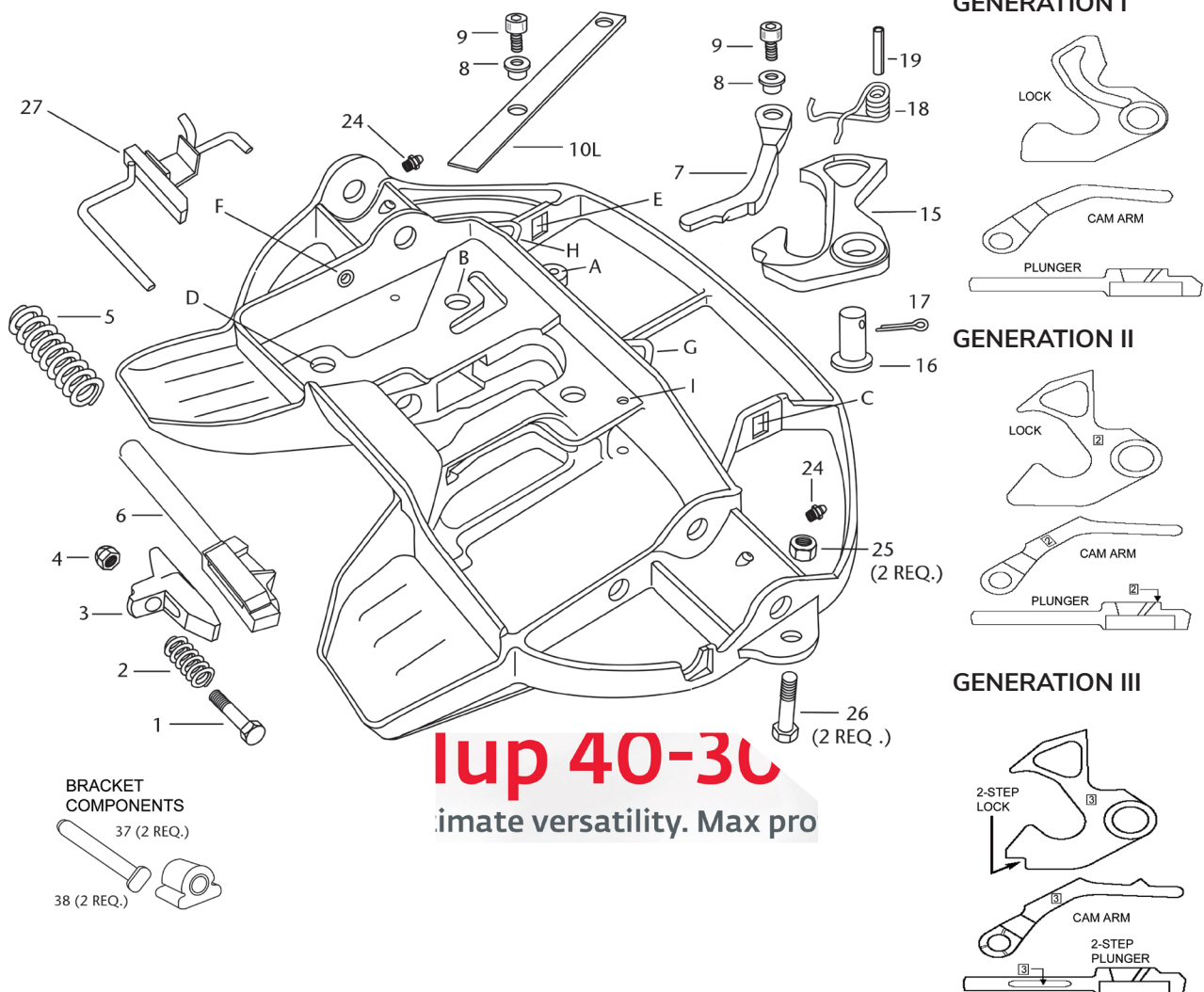
...for the long haul



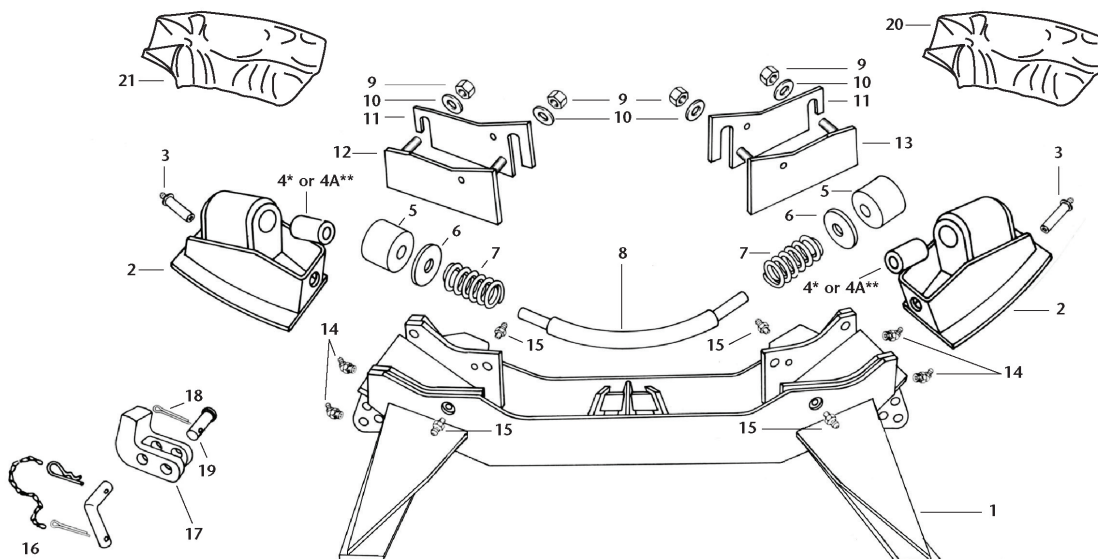


# Holland

## Fw8 Xa-201 Series Parts Breakdown



## Parts Breakdown Kompensator Fw8

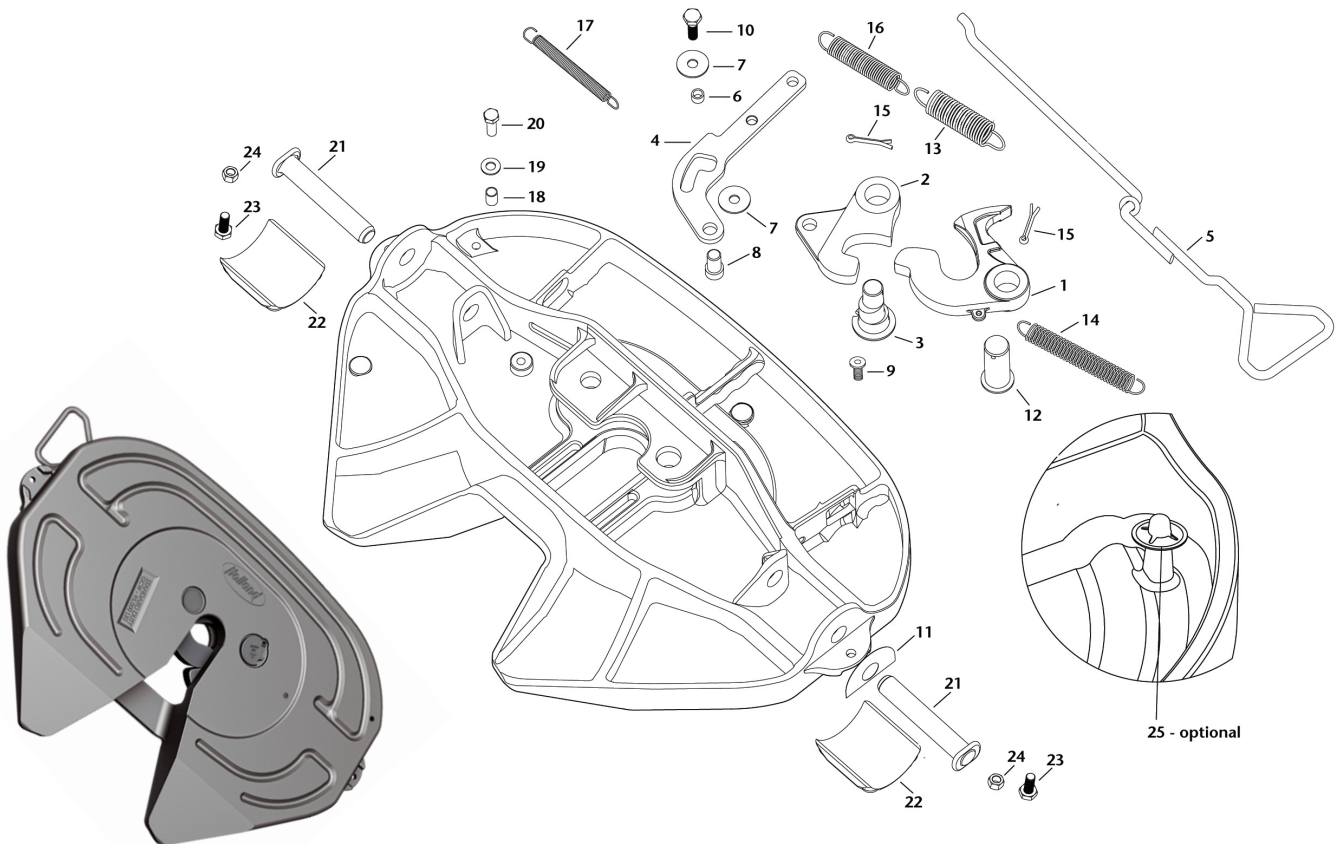


...for the long haul



# Holland

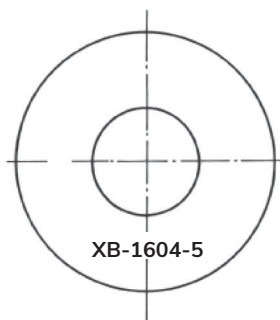
FW17 / XA-17



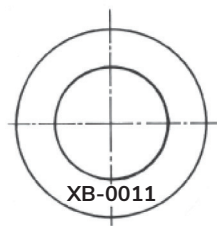
**Lightweight cost effective fifth wheel**

## Trunnion Bush Chart

FW2000 OLD STYLE  
FW3500 Mfg. prior to May, 1982  
FW3600

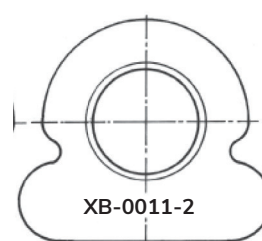


**CURRENT**

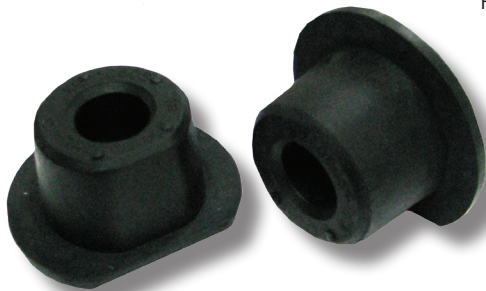


FW2000 KOMPENATOR  
FW3500 KOMPENATOR  
FW3501-UB

**CURRENT**



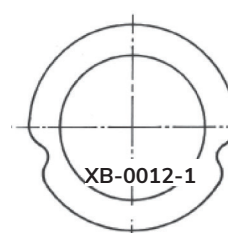
FW2000  
FW3500  
FW3600



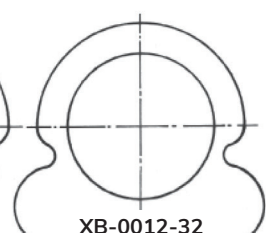
**New Style**  
XB10605

Mfg. May, 1982 - Oct 1987

**CURRENT**



FW0070



FW0070

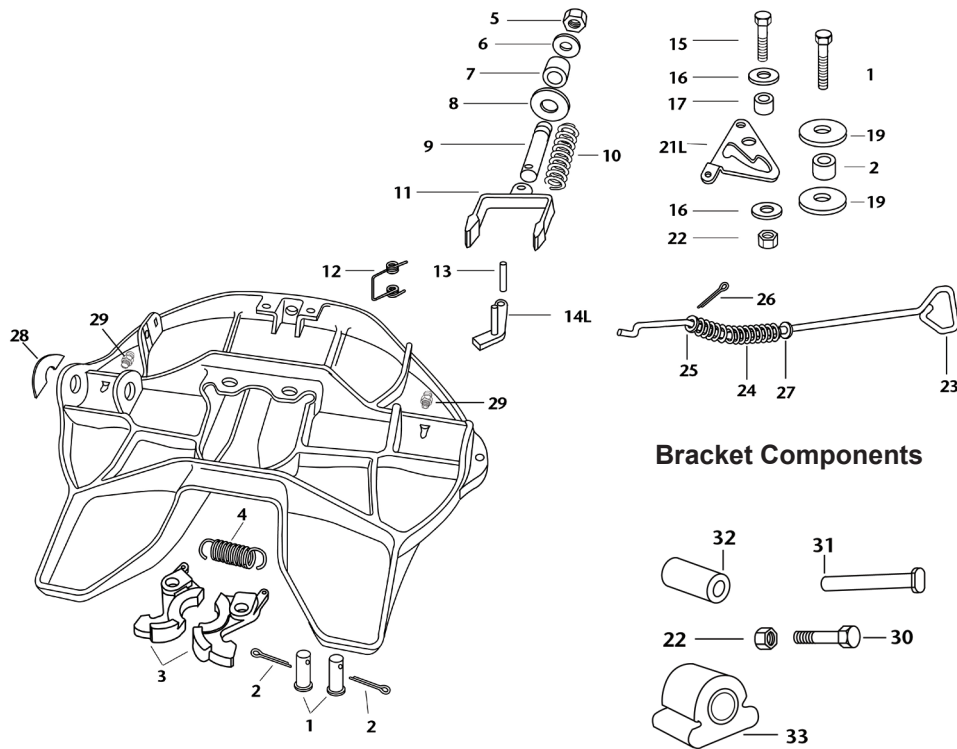


*...for the long haul*

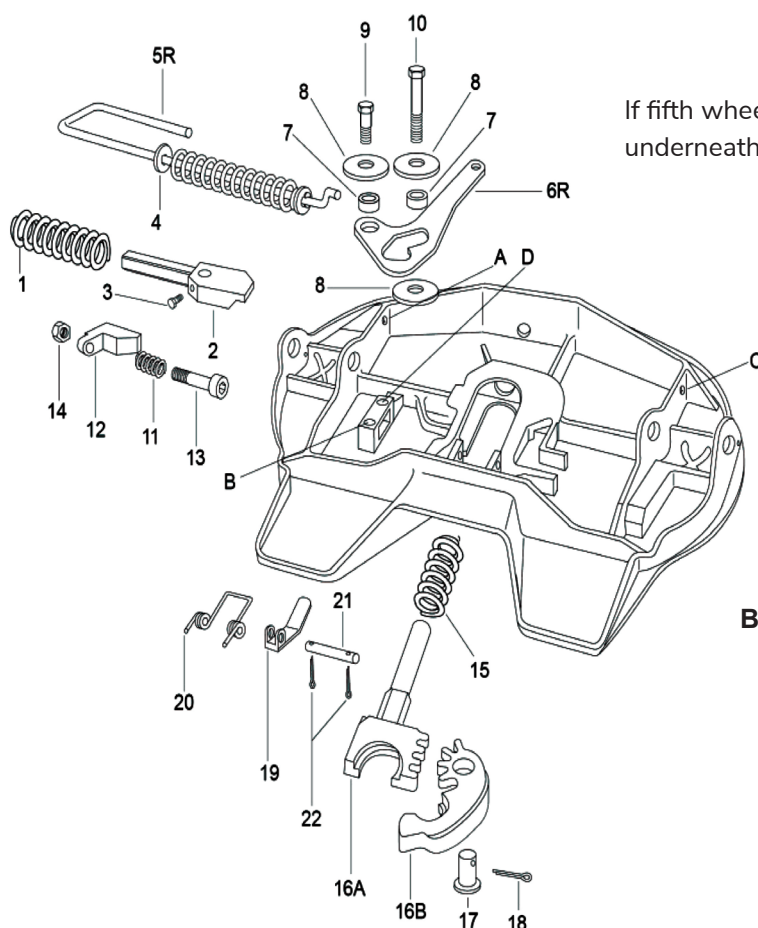


# Early Holland

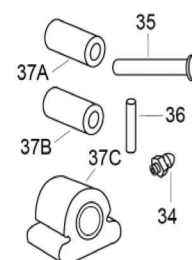
FW331/351 XA3501



## FW2000 XA-2000 Series Parts Breakdown



### Bracket Components

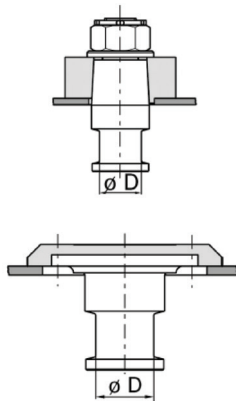


...for the long haul



# Kingpins

## King Pin Identification

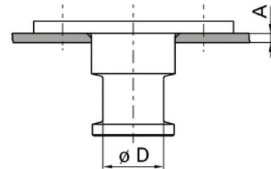


### Cone Shaped

Pins for retention plates with cone shaped locating hole (flange).

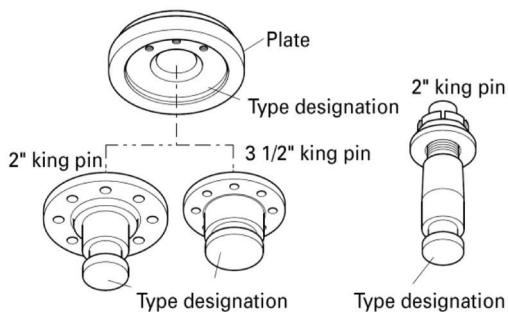
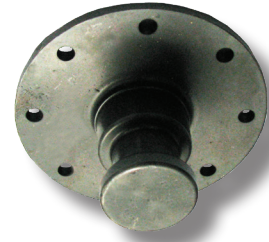
### Drop Out

Pins for dish-shaped retention plates. The pin is bolted to the retention plate and is easy to replace from underneath.



### DROP IN

Pins without a retention plate. The pin is bolted to the top plate.

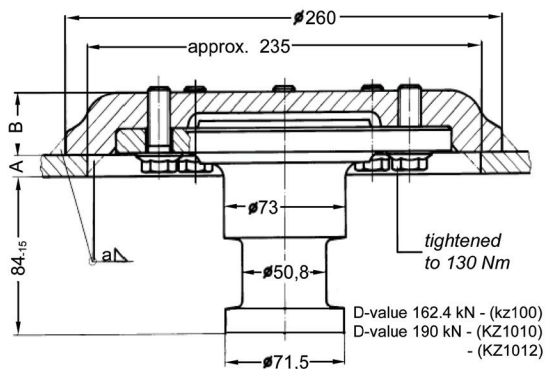


The respective type designation is stamped into the pin and the retention plate: (As shown).

### TRT TIP

Always replace mounting bolts each time you change the king pin. Torque to manufacturers settings.

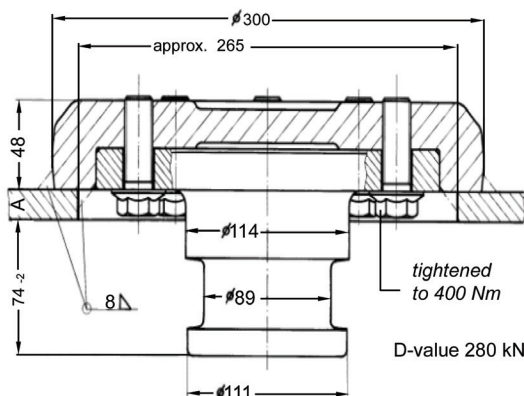
## KZ 1008, KZ 1012



Skid Plate Thickness	Part No.	Colour	Retention Plate	King Pin
8mm	KZ 1008	White	KZ 1008-02	KZ 1012-01
10mm	KZ 1010	Blue	KZ 1010-02	KZ 1012-01
12mm	KZ 1012	Yellow	KZ 1412-02	KZ 1012-01



## KZ 1016



Skid Plate Thickness	Part No.	Retention Plate	King Pin
16mm	KZ 1016	KZ 1016-04	KZ 1016-01



...for the long haul





# Rockinger

## 66000 SERIES



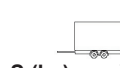
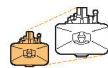
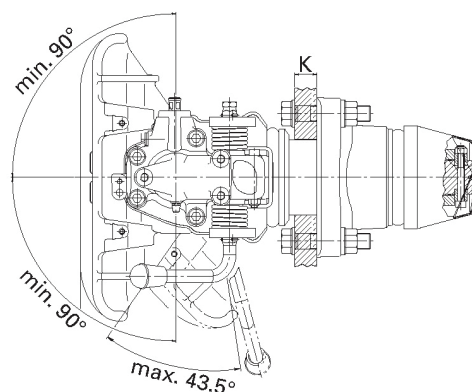
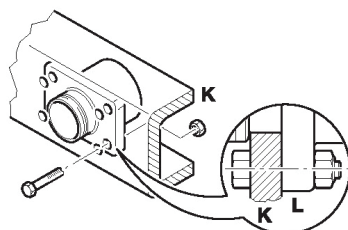
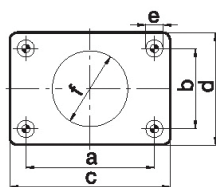
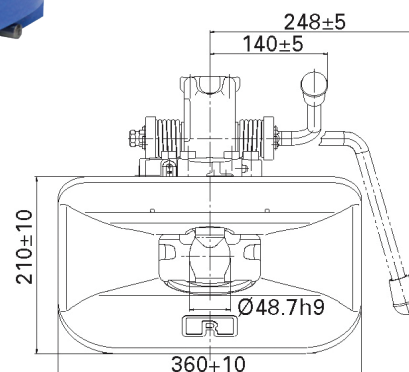
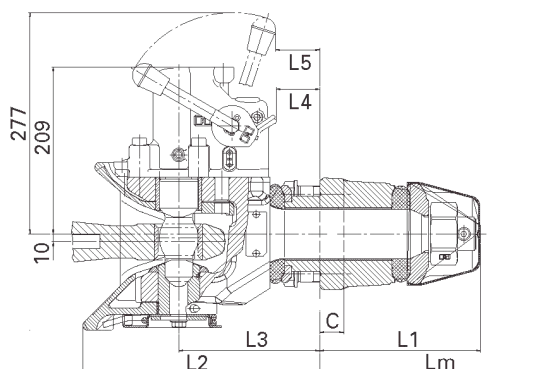
### ROCKINGER 66000 SERIES

The Trailer Coupling for New Zealand conditions Rotating Pin for long service.  
Wide angle jaw for Jack knifing.



a = 50 DIN  
74053  
94/20/CE,  
ISO 1102,  
ROE 57005

Now with wear pad



e1

RK500B66000	B	6	160x100	200	140	1000	90	50	00-1844



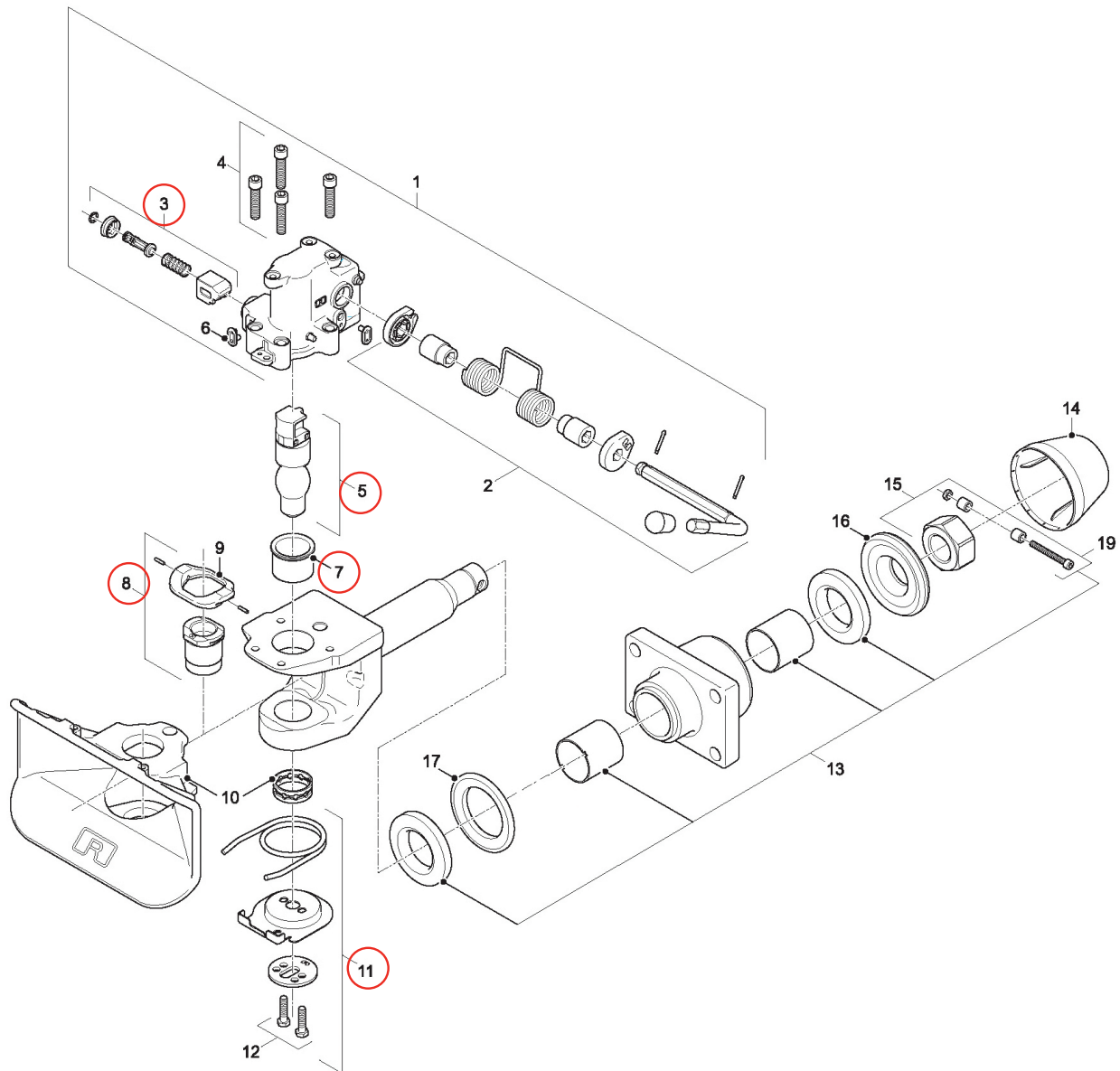
...for the long haul





# Rockinger

## 66000 SERIES SPARE PARTS



Item	Part No.	Description	Item	Part No.	Description
1	71442B	Coupling Head Assy B66000	10	46145	Funnel B66000
2	71644B	Handle Assy Long B66000	11	71331	Kit Spring Plate B66000
3	27009	Safety Catch B66000	12	30486	Kit Bolts B66000 Spring Plate
4	30417	Bolt Coupling Head	13	71801	Kit Trunion Bush B66000
5	47130	Pin 50MM Rotating B66000 Coupling	14	25347	Cap Plastic B66000 Trunion Nut
6	25558	Plug	15	71802	Kit Nut + Bolt B66000 Trunion
7	53604	Bush Upper B66000	16	59393	Rear Plate B66000 Trunion
8	53637	Kit Bush Lower + Wear Plate B66000	17	44177	Front Plate B66000 Trunion
9	59428	Kit Wear Plate B66000	19	30492	Bolt B66000 Trunion

**3,5,7,8,11 71805 Kit Pin + Bush B66000 Major Rebuild**