



# AUTOGUIDE EQUIPMENT



## Operating Instructions and Spare Parts Lists



## MINI & MIDI Postmaster

### Autoguide Equipment

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These instructions give safety and operations information regarding the use of a Digger Mounted Postmaster supplied by Autoguide Equipment. They contain the relevant information for products:

Product Code	Description	Force ( <i>kN</i> )
47315	Mini Postmaster	50
48298	Midi Postmaster	60

To ensure optimum results when operating this machine it is very important to read this manual carefully, the information will prepare you to do a better, safer job.

Before operating the machine you should familiarise yourself with the instructions in this manual. Incorrect use can lead to damage which is not covered by the Warranty Conditions. This may create a dangerous situation or lead to unsatisfactory results.

These operating instructions **MUST** always be made available to the person or persons operating this machine.

To assist in the ordering of spares, or other communications with our company, the serial number of the relevant equipment supplied, has been recorded below for your information.

Model No:-

Serial No:-

Date of delivery:-

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# INFORMATION

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Your Postmaster has been individually built with great emphasis on quality, strength and simplicity of design and with routine care will give many years of trouble free operation.

The following instructions have been written to cover the use and maintenance of the machine. Care should be taken to ensure that you are referring to the correct section of your machine before carrying out any adjustments, or when ordering spare parts.

Like all mechanical products, regular cleaning, lubrication and maintenance will ensure a longer trouble free life. These instructions make no attempt to go beyond routine maintenance, and it is strongly advised that you contact your dealer should any major repairs become necessary.

Use only genuine service parts; non genuine parts may not meet standards required for safe and satisfactory operation.

**Observe all safety information in the manual and on decals fitted to the machine and power unit.**

## Safety Instructions

1. Read and understand this operator's manual prior to operating the machine and keep it in a convenient place for future reference.
2. Keep untrained personnel away from the machine whilst it is in operation.
3. Keep all guards and safety devices in place.
4. Do not operate machine with guards removed.
5. Beware, pressured hydraulic oil can be very dangerous and can penetrate the skin - TAKE THE UTMOST CARE.
6. Keep hands, feet and loose clothing away from moving parts.
7. Always switch off the machine before making any adjustments or when carrying out lubrication and servicing.
8. Keep all nuts, bolts and fasteners tightened.
9. Check machine regularly for damaged or worn parts.
10. If the machine is left unattended ensure that it is locked or disabled to prevent use by untrained personnel.

## Daily Check Items

1. Check the unit is properly and securely attached to the crane/excavator unit.
2. Checks that all nuts and bolts are secure, mounting pins are properly retained, and all safety shields are in place. (All nuts and bolts should be checked after the first 10 hours of operation.)
3. Check the condition and security of the safety webbing.
4. Lubricate all grease nipples.

# POSTMASTER SPECIFICATION

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	<b>Mini Postmaster</b>	<b>Midi Postmaster</b>
Eccentric Force	50 kN	60 kN
Max. post Diameter	6" (150mm) diameter	8" (200mm) diameter
Hydraulic Service	Double acting. 30-40 l/min	Double acting. 35-46 l/min
Maximum Pressure	200 BAR	200 BAR
Suitable Machines	1.5 to 3 tonne Excavator	2.5 to 5 tonnes Excavator

## Optional Equipment

A range of additional attachments are available for a variety of different posts and conditions. They are:

1. Flow Divider for higher flow machines – *For hard to reach jobs a larger machine is sometimes necessary. To protect the motor and seals it can be necessary to add a flow control option to prevent internal damage.*
2. Mounting Bracket to fit Loaders – *a special bracket so that the Postmaster can be used when mounted on loaders and hangs level.*
3. Rock Spike – *A rock spike can be supplied to act as a pilot for the post. This can be gripped by the standard jaws. Standard size 60mm diameter 1m long*
4. Dibber – *To create a concrete back fill hole and leave the central bar in place. A 250 x 150mm compacted void is left in the ground and either a length of re-bar or angle is let in the ground. The advantages are no soil away and a compacted hole prepped for cement.*

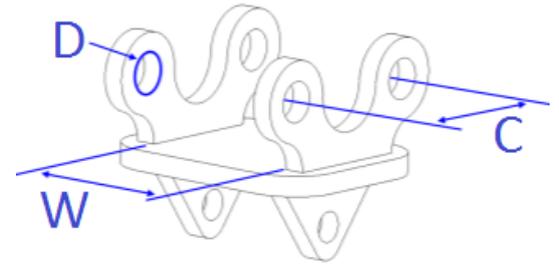


5. Post Clamps - A wide range of clamps are available to suit posts of all shapes, sizes and material. With a drawing of the top of the post the jaws will be manufactured to suit. A range of readily available jaws are shown below.

Description	Kit Number	Drawing	Schematic
Round Section	45210		
Square or I Section	45210		
C or J Section	Size dependent - contact Autoguide		
Z section	Size dependent - contact Autoguide		
Round Section w/ fingers for post handling	40641		

## Specifying the Unit

The 4 bolt mounting plate allows the fitment of brackets to suit most diggers in the quoted range. It is essential to confirm the pin diameter (D), width of boom (W), and pin pitch (C) before ordering. Not all quick hitches will be suitable for use with the Postmaster, although those designed for hammer operations should be suitable – please check with the supplier first.



Standard post clamps can be adjusted for post size and specials can be devised where possible.

Posts can be wood, metal, GRP or concrete, but special clamps will be needed. Posts may not need points but this can help in hard soils. Clearly some soils will be too hard for successful operation, but the use of a steel pilot or rock auger can usually solve the problem. Generally, pilot holes should be 30% smaller than the post to ensure a good tight installation.

# POSTMASTER INSTALLATION

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The safe operation of this equipment is the responsibility of the operator, who should be familiar with the lifting process, the power unit and all safety practices before starting operations.

## Attaching the Postmaster to the Power Unit

1. **SWITCH OFF** the power unit.
2. Attach the Postmaster to the digger using standard mounting pins or a quick hitch. It is recommended to mount the postmaster with the valve cover facing the operator to aid visibility and allow easier hydraulic connection.
3. Connect the auxiliary supply hoses together and flush the system through for a minimum of 10 minutes to ensure any debris is removed by the filter system of the supply.
4. De-pressurise hydraulic systems using the manufacturers approved techniques before connecting the Postmaster
5. Connect the Postmaster's two ½" hydraulic feed hoses to the auxiliary hydraulic supply, ensuring no debris gets on the connections.



**Note: Hose size and condition of any quick couplers that are used will have an effect on the efficient operation of the unit.**

**Note: If the weather is very cold, allow the oil to warm up before operating the vibrator. The motor used has special seals which will tolerate back pressure up to 30BAR. Forcing cold oil through quick couplers may exceed this limit and compromise seal life.**

**Note: All hydraulic motors are sensitive to foreign objects in the hydraulic oil. Debris can cause damage thus reducing the efficiency and output power of the motor.**

6. Briefly operate the digger's auxiliary circuit to test the Postmaster and ensure operation. **DO NOT** run the vibrator without a post in the jaws.

**Note: If there is an issue when operating the Postmaster and it only seems to be working in one direction, there is an issue with the digger hydraulic flow. Most mini diggers are equipped with an auxiliary double acting circuit but this can be modified when using a breaker for example. This is done via a valve that is fitted to the machine that changes the auxiliary circuit from Double Acting to Single acting. The valve location varies but is commonly on the right hand side of the machine under a cover, and should be set to the "Closed" position.**

7. Once complete, lower the Postmaster unit to the ground while not in use.

## **Pre-operation check list**

1. Keep bystanders away from all moving elements.
2. Ensure you are aware of the environment you are working in; be aware of overhead cabling and other utilities services.

# POST INSTALLATION

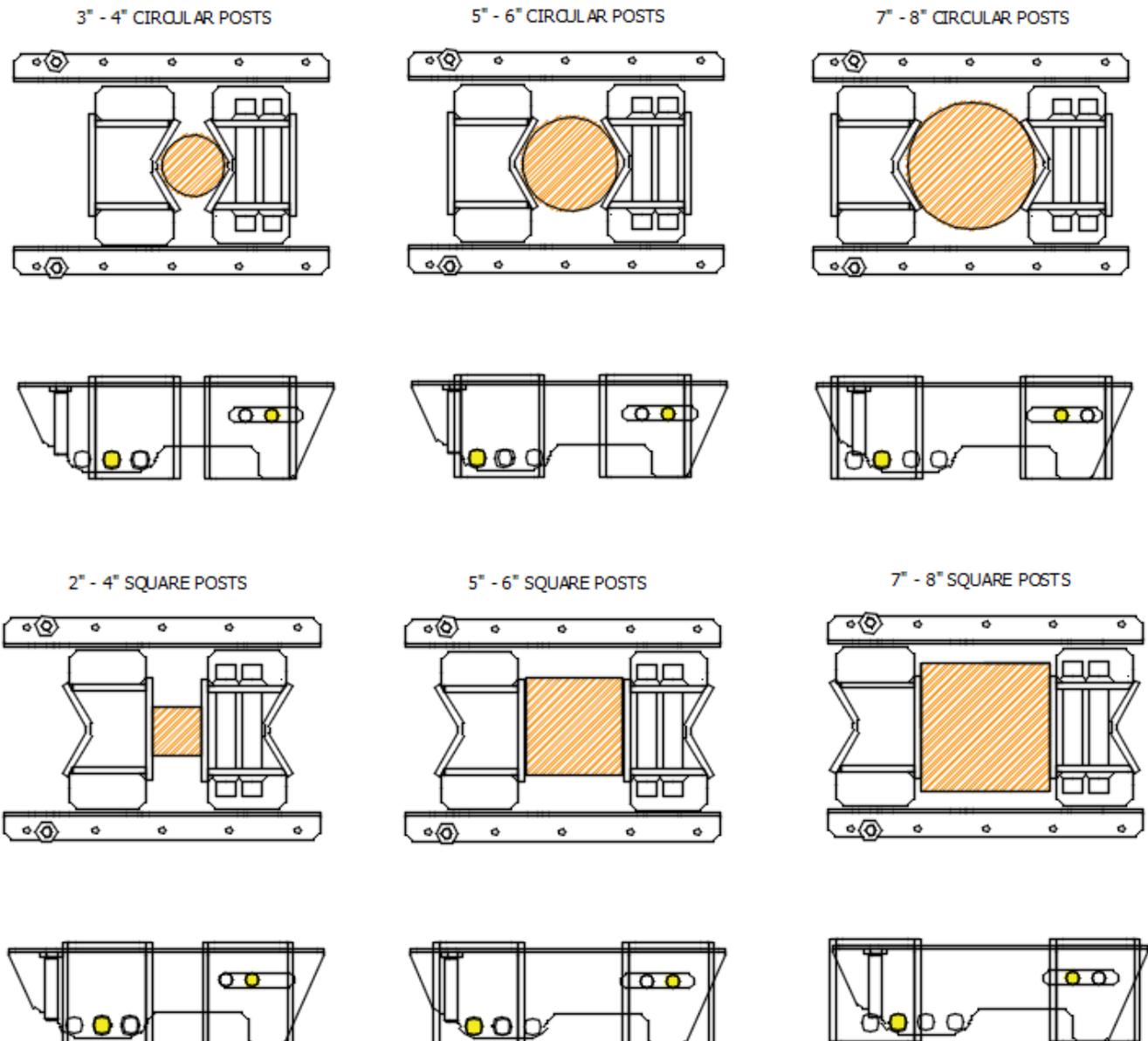
## Hydraulics Operation

Operating the hydraulics one way causes the clamp to close, followed by the start of vibration. Reversing the flow opens the jaws without vibration. **DO NOT** run the machine without a post in the jaws.

## Jaw Selection

The postmaster is supplied with a pair of universal jaws. This allows the user to install circular, semi-circular, square and rectangular posts with the same jaws but with a different configuration. Multiple jaw combinations are available, but for best performance it is important to keep the post central to the postmaster.

Below shows a selection of configurations to enable different size and shape posts to be put in. The required pin location is highlighted in yellow.



## Operation Sequence

The Postmaster jaws have 3 positions, accommodating posts up to 8" in diameter. First, ensure the jaws are in the correct range for the post size in use.

1. To adjust the jaws, remove the lynch pin and the static jaw pin (at the base end of the ram). Slide the jaws into the desired position, align the holes, and reinsert the jaw pin and lynch pin.
2. Stand a post vertically, and move the Postmaster into position directly above it.
3. Keeping the post central in the jaws, lower the Postmaster until the base of the Postmaster sits on top of the post.
4. Gently operate the hydraulic circuit to close the jaws.
5. Lift the post and adjust the bucket crowd angle to be parallel to the ground, allowing the Postmaster to hang freely.



6. Using the boom, move the post into the desired position and push it into the surface if suitable ground. Ensure the excavator blade is lowered to add stability.
7. Start the vibration and push the post into the ground, ensuring the post is pushed vertically downwards.
8. Once the post is installed to the desired depth, simply release the jaws and lift the Postmaster away.



### **General Principles of Operation**

You may find it useful to reduce oil flow by reducing engine revs – at low flow the vibration amplitude will be greater.

- Make sure the crowd ram keeps the rubber buffers level and not twisted.
- Try to imagine the vibrator and post as one unit with the excavator merely guiding and pushing the post.
- Vary the vibration frequency by changing engine speed or feathering the valve to get the best effect.
- In general, metal posts need higher frequency vibration than wooden ones.
- Posts can be vibrated sideways or extracted.
- Use of a template will aid in ensuring accurate pitch for post and rail fencing.

# MAINTENANCE

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1. Keep all hardware tight – re-torque regularly until stable.
2. Inspect all hoses for signs of wear and replace as necessary.
3. Inspect the rubber buffers for signs of cracking – replace promptly to prevent failure.
4. The gearbox contains 0.5 litres of universal oil. This is sufficient for 12 months operation, so annually remove the lid, pour out the old oil, check all hardware, and add 0.5 litres of new oil. **DO NOT OVERFILL.** Re-seal the lid using a silicone gasket sealant.
5. Inspect the unit on a regular basis and check for oil leaks. Rectify any that are seen – and if it is gearbox lubricant, verify that a minimum depth of 8mm is present in the gearbox.
6. All bearings are of sealed type and require no lubrication.
7. Loctite retaining compound should be used on the bolts in the rubber buffers.
8. Replace any worn pins and locking hardware as soon as wear is apparent. Note that locking pins should be installed horizontally rather than vertically and use conventional split pins where rotation is possible.

# SAFETY

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## General Safety Guidance

1. The excavator should be correctly maintained and operated by a trained and competent person.
2. The banksman and machine driver need to establish a system of communication which is thoroughly understood. It may be appropriate to wear radio communication equipment in conjunction with appropriate PPE, to ensure consistent safe communication.
3. We believe that when correctly operated, the Autoguide Postmaster is safer than a conventional falling weight post driver. Nevertheless, take care to avoid contact with the machine and stay out of its working area whenever it is working. Fence posts can fail unexpectedly so stay out of the working zone of the machine.
4. Hydraulic oil can cause severe injury, either because it is at high pressure or high temperature. Take care to check hoses and connections and rectify any damage or leakage.
5. The Postmaster has proven to exceed its original design objectives. However, it must be accepted that satisfactory performance will only be achieved in conjunction with sympathetic operators, careful work planning and optimum base machine performance.
6. The basic concept demands the use of a twin shaft vibrator, which results in pure vertical movement. The vibrating weights must overcome the dead weight of the gearbox, post clamp and the post. The rubber mounts allow this vibration to take place whilst causing the least possible vibration of the excavator hitch and boom.
7. It follows that larger excavators (usually up to 3 tonnes) will deliver better performance as they have greater mass made up of hitch and boom components.

## Optional Flow Control Valve

On larger diggers, an additional flow control valve is required to limit the flow to the Postmaster, to prevent excess oil flow to the Postmaster motor. Excess flow will result in over-speeding of the vibrator and will damage the motor. The flow control valve is set in the factory.

In the event that the Postmaster is connected to a smaller excavator, it may be necessary to open the valve in order to achieve adequate vibration speed.

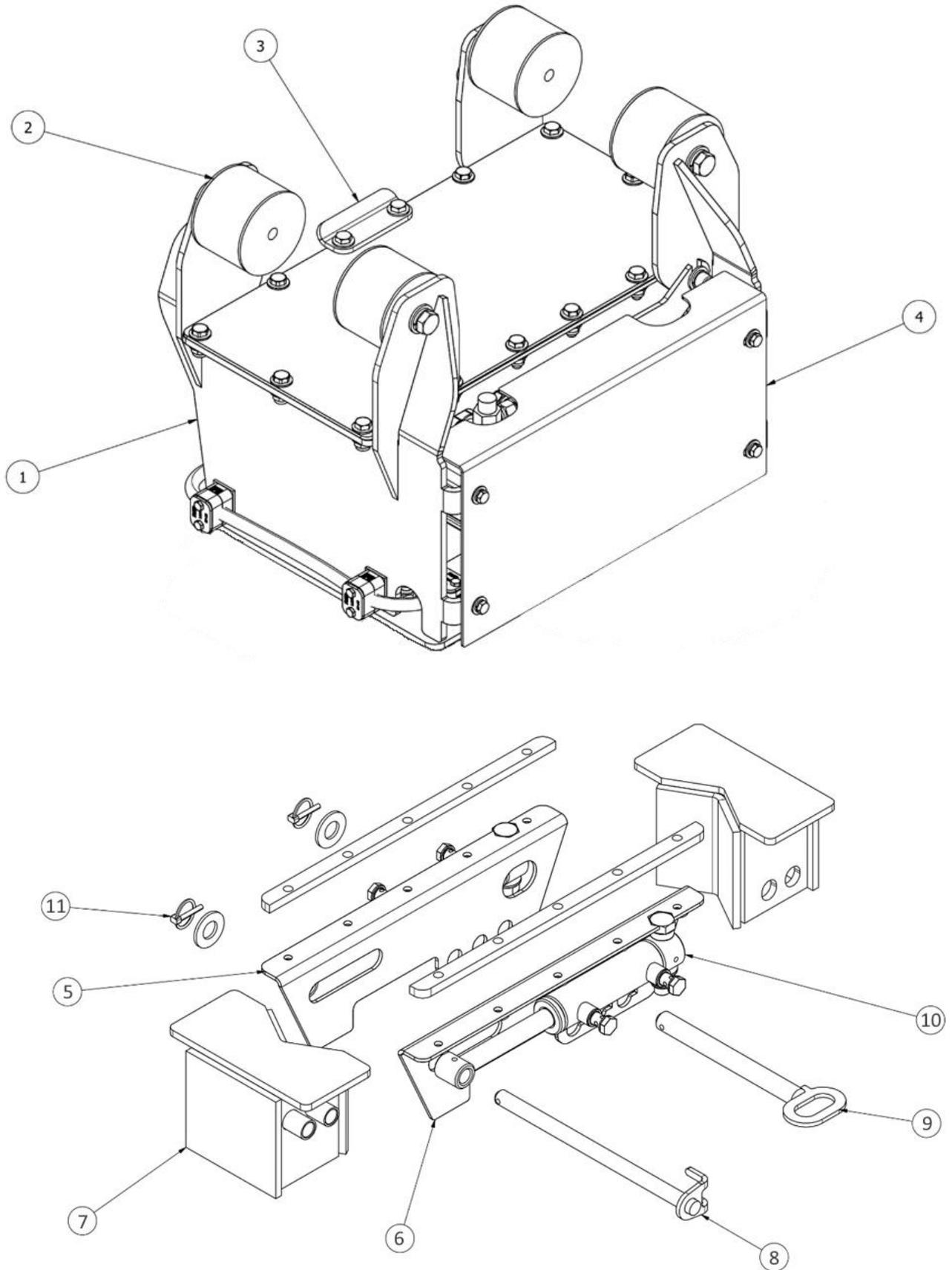


It is important to do this gradually i.e. 1/4 turn at a time (counter clockwise), to achieve an optimum cycling speed. Note: Turning the valve clockwise will further reduce the flow.

It should also be noted that the vibrator speed is proportional to engine revs, so running the engine at high rev/min may also over-speed the motor.

# SPARE PARTS LIST

## Postmaster



Code  
**47315**

Description  
**MINI POSTMASTER**

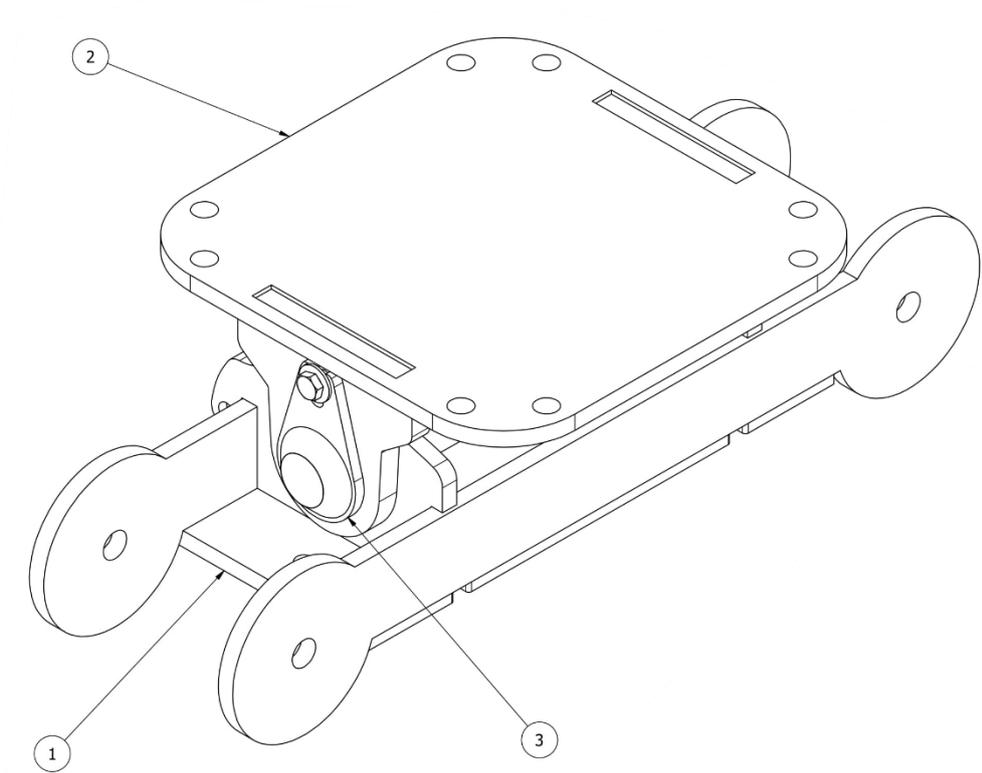
<b>No.</b>	<b>Code</b>	<b>Description</b>	<b>Quantity</b>
1	49342	MINI PM MK2 SUB-ASSY	1
2	07420	RUBBER BUFFER 43 SHORE	4
3	47387	WEBBING CLAMP	1
4	47311	MOTOR COVER	1
5	47336	SIDE CHANNEL RH	1
6	47343	SIDE CHANNEL LH	1
7	45210	UNIVERSAL JAW KIT WA	1
8	47338	MOVING PIN WA	1
9	47351	FIXED JAW PIN WA	1
10	11752	JAW RAM	2
11	10791	PIN LYNCH M006	2

Code  
**48298**

Description  
**MIDI POSTMASTER**

<b>No.</b>	<b>Code</b>	<b>Description</b>	<b>Quantity</b>
1	48298	MIDI PM MK2 SUB-ASSY	1
2	07420	RUBBER BUFFER 43 SHORE	4
3	47387	WEBBING CLAMP	1
4	47311	MOTOR COVER	1
5	47336	SIDE CHANNEL RH	1
6	47343	SIDE CHANNEL LH	1
7	45210	UNIVERSAL JAW KIT WA	1
8	47338	MOVING PIN WA	1
9	47351	FIXED JAW PIN WA	1
10	11752	JAW RAM	2
11	10791	PIN LYNCH M006	2

## Swing Mount

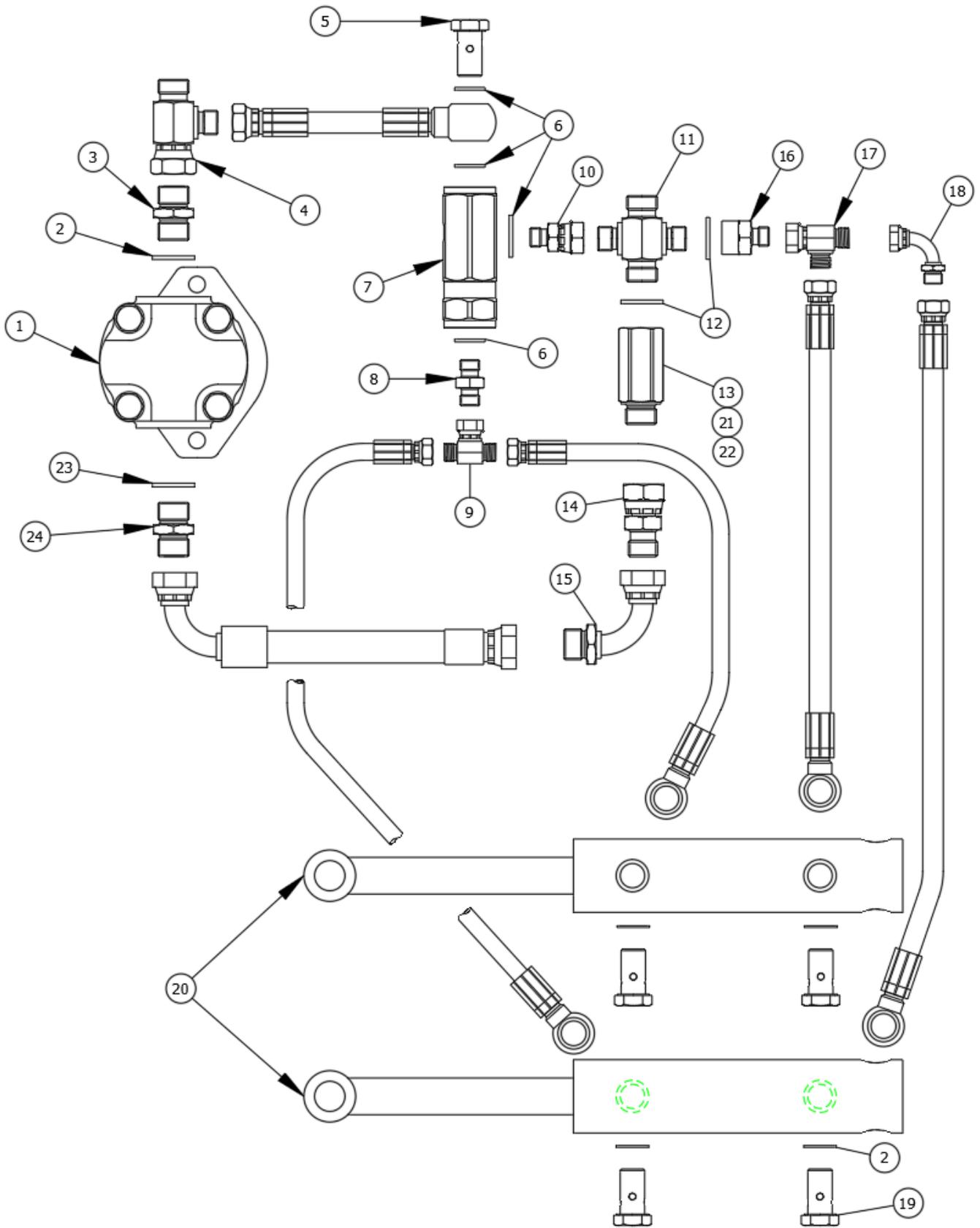


Code  
**47341**

Description  
**POSTMASTER SWING MOUNT**

No.	Code	Description	Quantity
1	47332	SWING MOUNT WA	1
2	47361	SWING ATTACHMENT WA	1
3	47320	SWIVEL PIN WA	1

# Hydraulics

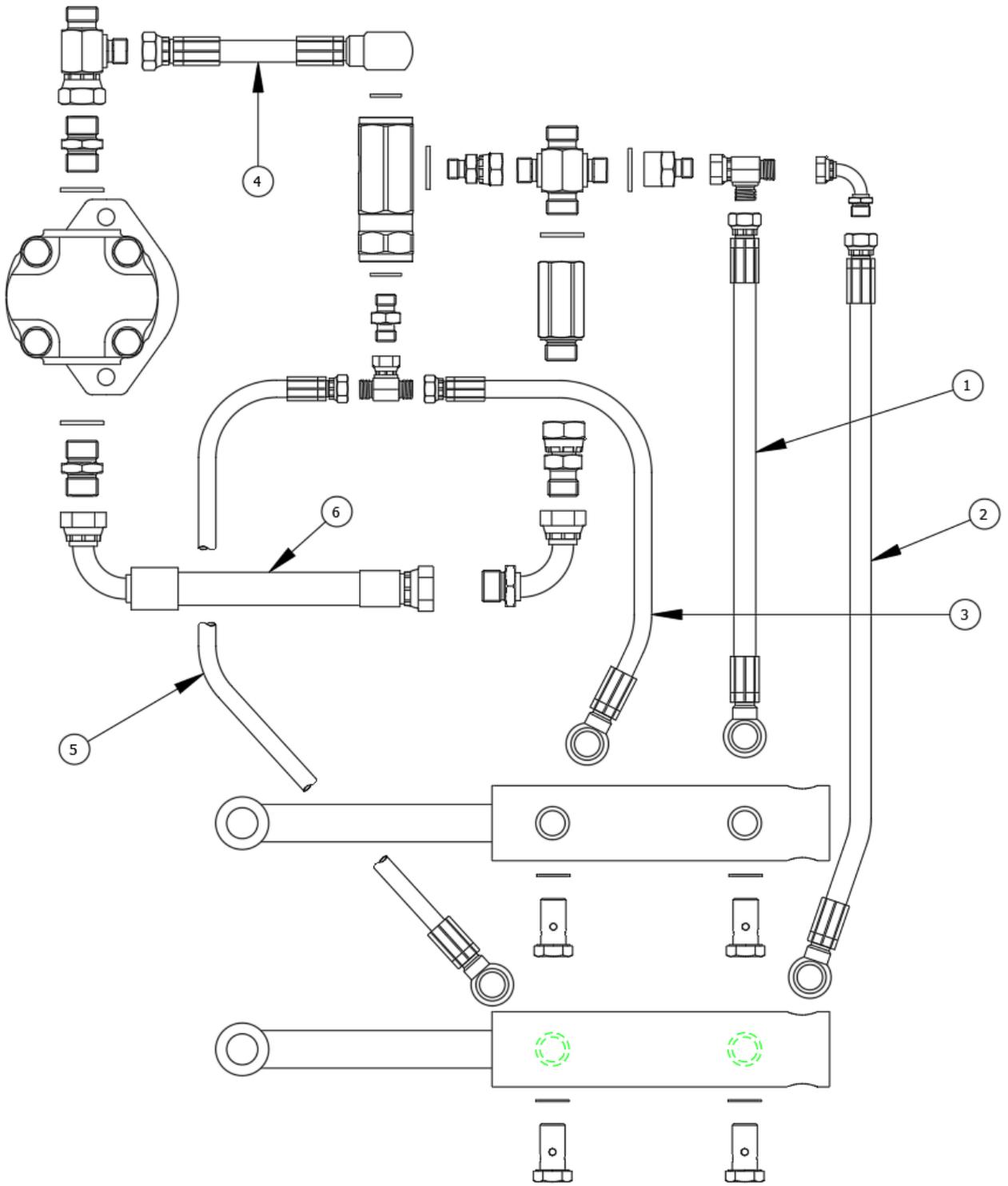


Description  
**MINI POSTMASTER HYDRAULICS**

<b>No.</b>	<b>Code</b>	<b>Description</b>	<b>Quantity</b>
1	49673	HYDRAULIC MOTOR	1
2	01159	Bonded Seal	5
3	01099	MM Adaptor	1
4	11739	FMM Tee	1
5	01910	Banjo Bolt	1
6	01813	Bonded Seal	4
7	06740	HYDRAULIC VALVE	1
8	01092	MM Adaptor	1
9	03625	MFM Tee	1
10	11984	MM Adaptor	1
11	11985	ADAPTOR M CROSS	1
12	02182	Bonded Seal	3
13	06764	CHECK VALVE MF Body	1
14	11937	MF Adaptor	1
15	06802	Swept 90 Elbow MF	1
16	03044	ADAPTOR MF	1
17	01130	FMM Tee	1
18	01119	Swept 90 Elbow	1
19	05601	Banjo Bolt	4
20	11752	HYDRAULIC RAM	2
21	04986	VALVE CHECK INSERT	1
22	36379	INSERT SPACER CHECK VALVE	1
23	02182	Bonded Seal	0
24	01097	MM Adaptor	1

Description  
**MIDI POSTMASTER HYDRAULICS**

<b>No.</b>	<b>Code</b>	<b>Description</b>	<b>Quantity</b>
1	49672	HYDRAULIC MOTOR	1
2	01159	Bonded Seal	6
3	01099	MM Adaptor	2
4	11739	FMM Tee	1
5	01910	Banjo Bolt	1
6	01813	Bonded Seal	4
7	06740	HYDRAULIC VALVE	1
8	01092	MM Adaptor	1
9	03625	MFM Tee	1
10	11984	MM Adaptor	1
11	11985	ADAPTOR M CROSS	1
12	02182	Bonded Seal	2
13	06764	CHECK VALVE MF Body	1
14	11937	MF Adaptor	1
15	06802	Swept 90 Elbow MF	1
16	03044	ADAPTOR MF	1
17	01130	FMM Tee	1
18	01119	Swept 90 Elbow MF	1
19	05601	Banjo Bolt	4
20	11752	HYDRAULIC RAM	2
21	04986	VALVE CHECK INSERT	1
22	36379	INSERT SPACER CHECK VALVE	1
23	02269	Bonded Seal	0
24	01099	MM Adaptor	0



Description  
**POSTMASTER HOSES - 48291**

<b>No.</b>	<b>Code</b>	<b>Description</b>	<b>Quantity</b>
1	48287	Hose 1	1
2	48288	Hose 2	1
3	48289	Hose 3	1
4	48290	Hose 4	1
5	48671	Hose 5	1
6	48674	Hose 6	1
7	49249	Feed Hose (Not Shown)	2



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