



AUTOGUIDE EQUIPMENT



Operating Instructions and Spare Parts Lists



2500X / 1600X Powerhead

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

Product Code	Description	Maximum Output Power (Nm)
40322	1600X / 2500X Powerhead	25,000

To ensure optimum results when operating this equipment 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 equipment.

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

Your Powerhead 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. Check 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 any auger or anchor driver attachment.
4. Lubricate all grease nipples.

Maintenance

1. To ensure a long life, regularly grease the main pivot pins on both the gimbal and powerhead. This increases the ease of rotation of the powerhead and will help prevent seizure if kept lubricated.

POWERHEAD INSTALLATION

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 Powerhead to the Power Unit

1. **SWITCH OFF** the power unit.
2. Lubricate the mounting pins.
3. Attach the Powerhead to the digger using the correct swivel or mounting bracket. Depending on the specification of the Powerhead, ensure that it is mounted facing the correct way to ensure correct hose routing.



4. De-pressurise hydraulic systems using the manufacturers approved techniques before connecting the Powerhead.
5. Ensure all connections are clean and free from dirt before connecting the Powerhead hydraulic supply into the power units' auxiliary hydraulic supply.
6. Connect the hydraulic lines as follows:
 - Port A is connected to flow in.
 - Port B is connected to the flow return.

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

7. Disconnect the hoses from the motor, connect together and flush the system through for a minimum of 10 minutes to ensure any debris from installation is removed by the filter system of the supply.

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.

8. Reconnect to the motor, ensuring no debris gets on the connections.
9. Operate the digger's auxiliary circuit to test the Powerhead and ensure rotation.
10. Raise and lower the digger boom to make sure that there is no interference with the boom or and that the gimbal rotates as required.
11. Once complete, lower the powerhead unit to the ground while not in use.

Pre-operation check list

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

ANCHOR INSTALLATION

Torque Selection

The 2500X/1600X is a dual torque head that can be used for both 76R anchors and 89R anchors.

Note: It is important to select the correct torque setting for the anchors being used or the anchors may break during installation.

- For 76R Screw-piles use **LOW**
- For 89R Screw-piles use **HIGH**

To select the correct torque setting,

1. Determine which size of anchors you are using. This is the OD of the main tube. It will be either 76mm or 89mm.

2. Locate the sticker on the powerhead which shows the desired position.



3. Move the lever to the appropriate position.



Installing Screw Anchors

1. Attach the anchor driver to the powerhead using the pin and clip supplied.
2. Load the anchor lead section and place the retaining double pin through the drive head adapter and anchor.
3. Place the point of the anchor on the ground in the location required.
4. Begin to install the anchor with some force in the direction of travel, until the (first) flight is under the surface.
5. Once the flight is clear of the surface continue to install slowly and adjust the angle of installation to desired position.
6. Continue to install the anchor taking care to apply a little axial pressure and keeping the head along the line and angle of installation
7. On achieving desired depth and torque release the forward pressure on the driver and remove locking pins
8. Move the digger boom to remove the drive adapter from the anchor.
9. If required, insert the extension into drive adapter and secure with the locking pins.
10. Move the extension so that the sleeve on one end passes over the lead section and secure with two or 3 bolt assemblies as provided.
11. Repeat the process of screwing the pile into the ground, keeping a gentle axial pressure upon the pile.
12. Once complete, remove the locking pins, back off the drive adapter and powerhead and attach the termination bracket with bolts if required.

General Principles of Operation

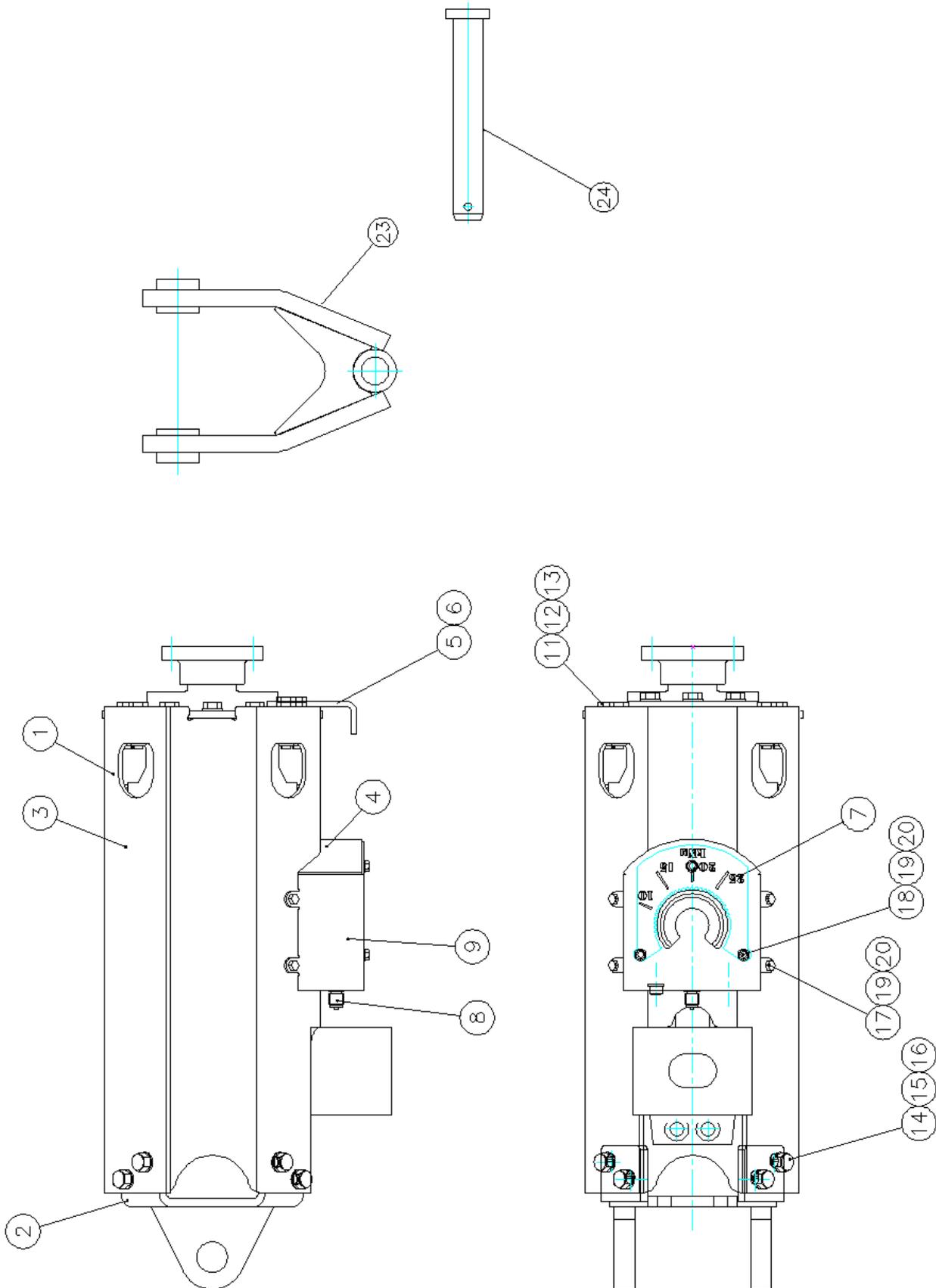
All Powerheads are designed to stall at the rated operating pressures before anything breaks, however continuous operation of stalled motors will overheat the hydraulic system and cause expensive damage. Therefore operate as fast as required but avoid excessive motor stall.

TROUBLESHOOTING

Symptom	Possible Cause	Action
Jerky	Cold Oil	Allow time to warm up
	Air in Pipes	Check oil Level
	Non Compatible Quick Couplers	Use Matched pairs
	Non Compatible Quick Couplers	Replace
	Hoses too small for flow	Replace
	Wrong Model Powerhead	Select appropriate model
Slow	Pump Failing	Carry Out flow and Pressure Check
	Oil Filter Blocked	Carry Out flow and Pressure Check
	Dirt Contamination	Service Exchange Motor
	Low Speed Lock Engaged	Put Selector in Auto
Poor Torque	Low Hydraulic Pressure	Carry Out Flow and Pressure Check
	Excessive Oil Temperature	Check Pump, Check Hose Sizes, Use Correct Powerhead
	Relief Valve Blows	Use smaller Auger or Larger Powerhead
Oil leaks	Loose Fittings	Tighten Up Fittings
	Leaky Connections	Reseal or check Configuration
	Pressure Too High	Use compatible head and fittings
Leak from Relief Valve	Drain Link is Kinked	Check 2 bar max back Pressure. Replace Relief Valve.
	Non Return Valve Seizes	Remove unit and check ball is free moving. Ball can become wedged & sticky, due to high pressure (over 20 bar) or extended storage. Replace valve & relief valve

SPARE PARTS LIST

40322 – 1600X / 2500X Powerhead



Code
40322

Description
1600X / 2500X Powerhead

No.	Code	Description	Quantity
1	27648	BODY W/A 50,000 PXV	1
2	30751	TOP PLATE W/A - 298 A/F	1
3	33892	MOTOR AND GEARBOX	1
4	30701	GUAGE BOX W/A	1
5	32526	60.000 PACKER PLATE	1
7	32527	60.000 GAUGE PROTECTION FOOT	1
8	34082	GAUGE SCALE 0-25 STAINLESS	1
9	08635	GAUGE 0-400 BAR 6IN BOTT ENT	1
10	30167	GUAGE BACKING PLATE	1
11	01638	PIN COTTER 3/8 X 2	1
12	02488	BOLT M014 X 060	12
13	03008	WASHER M014 FLAT FORM C	24
14	03006	NUT M014 NYLOC	12
15	06000	BOLT M016 X 045	8
16	02104	WASHER M016 FLAT FORM C	8
17	08177	NUT M016 X 2.0 SPIRALOCK	8
18	02992	BOLT M008 X 030	4
19	02851	BOLT M008 X 040	3
20	02496	NUT M008 NYLOC TYPE P	7
21	02977	WASHER M008 FLAT FORM C	11
22	40865	1600/2500X HYDRAULICS	1
22	31109	GENERIC BACK HOE HOSE KIT	1
22	29209	SWIVEL W/A	1
22	29216	TOP SWIVEL PIN W/A (Ø44.5)	2
22	09425	PIN LYNCH M009 X 052	2
22	40864	CHANGEOVER HANDLE	1
22	40867	CHANGEOVER DECAL	1



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