



AUTOGUIDE EQUIPMENT



EXCAVATOR MOUNTED POLE GRAB

MANUAL SPARE PARTS

Autoguide Equipment Ltd
Stockley Road,
Heddington, Calne,
Wiltshire, UK,
SN11 0PS
+44(0)1380 850885
www.autoguide.co.uk



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These instructions give safety and operations information regarding the use of an Excavator Mounted Pole Grab supplied by Autoguide Equipment. They contain the relevant information for products:

Product Code	Description	Maximum Pole Weight (Kg)
49463	Excavator Mounted Pole Grab	325

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:-

CONTENTS

Information	3
Safety Instructions	3
Daily Check Items.....	3
Specifications	4
Jaws	4
Pole Erecting Specifications	5
Pole Grab Installation	6
Optional Electrical Installation.....	6
Mounting the Pole Grab.....	7
Detaching the Pole Grab	7
Pre-operation check list	7
Pole Grab Operation	8
Installing a Pole	8
Service Information	9
Troubleshooting	10
End of Life	11
Spare Parts List.....	12
49463 - Pole Grab Top Level	12
49462 – Excavator Grab	13
49461 – Twin Grab Assembly	14
49443 – Excavator Rotator Assembly	15
49464 – Excavator Grab Hydraulics.....	16
49476 – Excavator Grab Hoses	17
Risk Assessment – <i>Excavator Mounted Pole Grab</i>	1
Section 1: Assessment Information	1
Section 2: Likelihood/Severity of Injury	1
Section 3: Control Measures	3
Further Action Required.....	3

INFORMATION

Your Excavator Mounted Pole Grab 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.

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 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.

SPECIFICATIONS

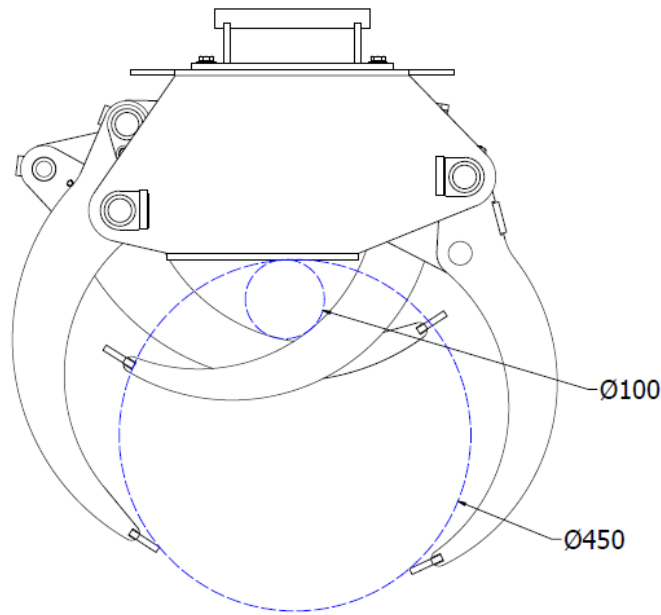
The pole grab has been designed to install utility poles. It comprises of a jaw assembly that will grip the pole and a rotator for manipulating the angle of the pole.

The rotator assembly is to allow the pole to be picked up from alongside the excavator at ground level. Using the excavator boom functions and the rotator functions the pole can be lifted above the ground and rotated so that it stands vertical ready to be planted into a pre-dug hole in the ground.

Jaws

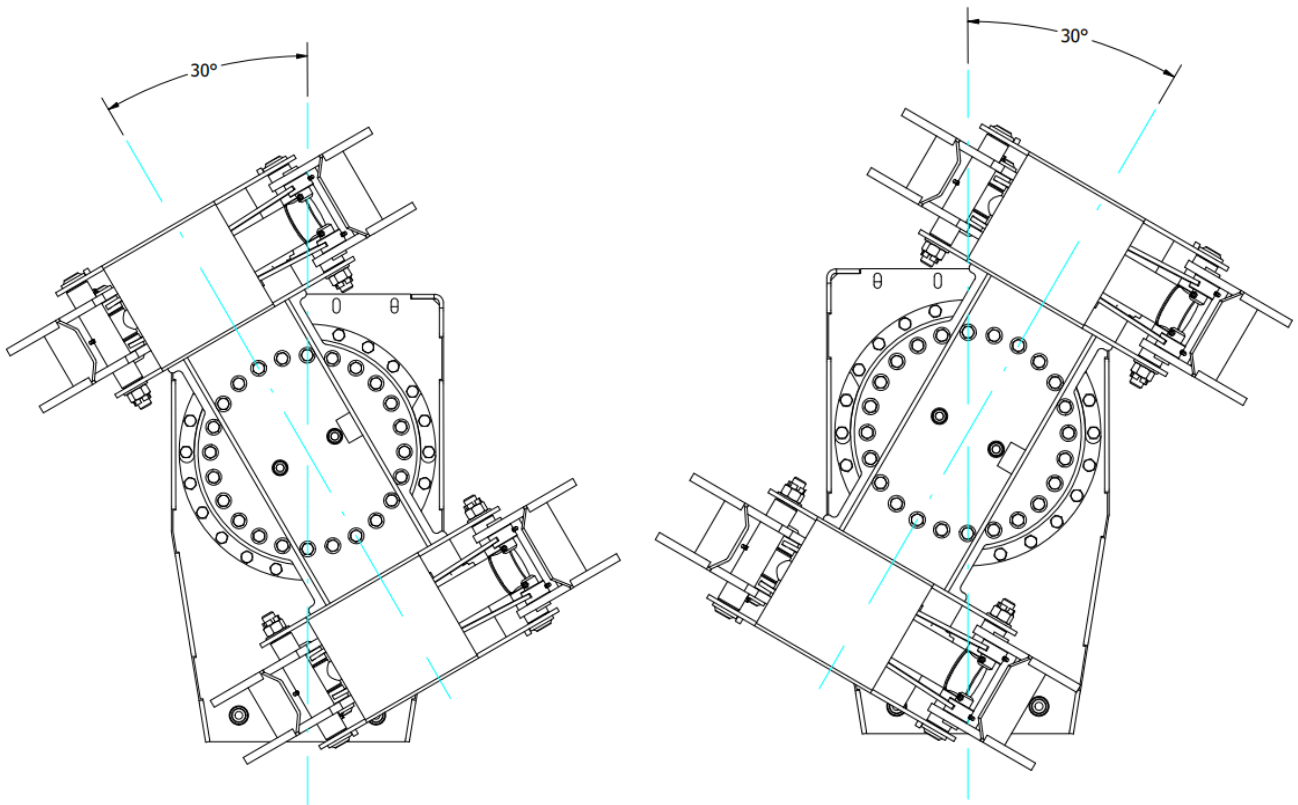
The jaw assembly is fitted with a set of claws that work in tandem to grip the pole. They can hold poles ranging in diameter from 4" to 18".

Each jaw produces 900kg of clamping force and is rated lifting 800kg. The ram is protected via a valve and accumulator to prevent unwanted opening or creeping.



Pole Erecting Specifications

The pole grab can rotate the pole a maximum of 30deg from vertical in each direction.



POLE GRAB 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.

Optional Electrical Installation

The pole grab requires two double acting hydraulic circuits to function, one for the rotate and one for the grab. In the event that the excavator does not have two double acting auxiliary circuits, the pole grab can be supplied with an optional valve to switch between the two functions.

If the optional valve is fitted, a switch needs to be fitted in the cab of the machine to enable the operator to switch between the two functions. The grab is supplied with a plug to match that fitted to the grab.

To install:

1. Mount a switch in the cab that will provide a 12V feed to the grab.
2. Locate a 12V supply on the machine that is powered only when the ignition is "On" and run a feed to the switch position.
3. From the switch position run a 2 core cable along the excavator arm to the auxiliary quick couplers.
4. Wire the supplied plug with the 2 core cable provided, using the wiring diagram below.
5. Connect the return wire from the socket to ground.
6. Test the circuit using a multimeter to ensure correct installation.
7. Install the switch in the cab and replace trim if required.



Mounting the Pole Grab

The Excavator Pole Grab is fitted with a welded attach bracket to suit a customer specified excavator. The brackets can be made to suit either a manual attach method or quick hitch.

1. Ensure that the pole grab is parked on even and level ground with the jaws fully open.
2. Manoeuvre the excavator boom above the pole grab. When the pole grab is parked onto its jaws, the highest location pin should be closest to the cab of the excavator.
 - a. If using a quick hitch, follow the manufactures recommended attachment procedure.
 - b. If using a manual hitch excavator, move the excavator to align the attachment pin holes. Insert the two location pins through the attach bracket and excavator boom. Fixed location pins in place with supplied bolts.
3. Switch off the excavator and depressurize its hydraulic services.
4. Connect the hydraulic hoses from the pole grab to the excavators Auxiliary function quick couplers.

WARNING: Ensure the excavators hydraulic AUX circuits are not in 'Breaker' mode. Using the grab on a breaker circuit will result in unpredictable operation.

5. Connect the optional electric plug if fitted.
6. Check hoses are suitably positioned and won't get trapped during use.
7. Switch on the excavator and test the unit to ensure correct functionality before use.

Detaching the Pole Grab

1. Fully open the pole grab jaws.
2. Lower the pole grab onto flat and level ground, with all four grab teeth touching the ground.
3. Fully switch off the power unit and release hydraulic pressure.
4. Unplug the hydraulics hoses and optional electric plug.
5. Detach the pole grab by removing the pines or using the quick hitch if fitted.

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.

POLE GRAB OPERATION

Installing a Pole

1. Manoeuvre the excavator alongside the telegraph pole with the grab rotated to match the orientation of the pole. Ensure that the end of the pole to be planted is closest to the excavator.
2. Slowly operate the jaws to close around the pole. Be careful not to damage the jaws when picking a pole from hard surfaces.

WARNING: Do not press the jaws into the ground.

3. Use the excavator arm and grab rotate functions to manoeuvre the pole to a vertical position.

WARNING: Ensure that the end of the pole is clear of the ground and excavator before operating the rotate function.

4. Position the pole directly above a suitable augured hole.
5. Slowly lower the pole into the hole. The slew, lift, crowd and rotate functions can all be used to keep the pole vertical.

WARNING: Ensure that the pole is not forced into the sides of the hole as this could damage the pole grab.

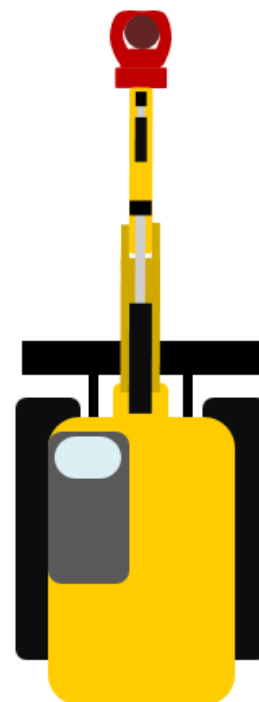
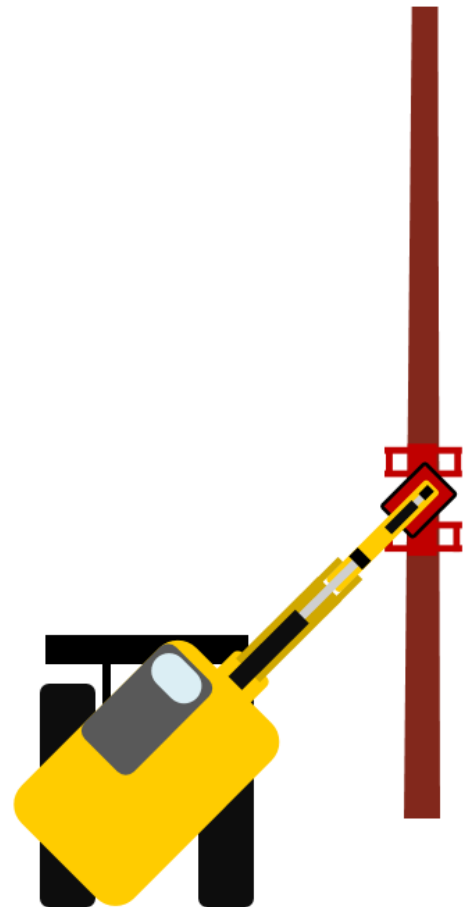
6. Once pole is in the correct position, the hole can be backfilled and tampered.

WARNING: Ensure excavator controls are deactivated whilst working around the base of the pole.

7. Once pole is secure in the ground, slowly operate the grab to relieve pressure on the hole.

WARNING: Ensure that the grab arms remain around the pole. The grab will then catch the pole should it not be properly secure.

8. If the pole is secure and upright, fully open the grab and manoeuvre the excavator away from the pole.



SERVICE INFORMATION

The service schedule of machine items is as follows:

Service Item		First 50 hour service	Service Interval			
			10 Hours <i>Daily</i>	50 Hours <i>Weekly</i>	500 Hours <i>6 Months</i>	1000 Hours <i>Annually</i>
Hydraulics	Rams			Inspect		
	Pipes		Inspect			
Other	Lubricating Points	Grease		Grease		
	Fasteners	Torque		Torque		
	Full Function Test		Test			

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
Slow	Non Compatible Quick Couplers	Replace
	Hoses too small for flow	Replace
	Pump Failing	Carry Out flow and Pressure Check
Oil leaks	Oil Filter Blocked	Carry Out flow and Pressure Check
	Dirt Contamination	Service Exchange Motor
	Loose Fittings	Tighten Up Fittings
Oil leaks	Leaky Connections	Reseal or check Configuration
	Pressure Too High	Use compatible head and fittings

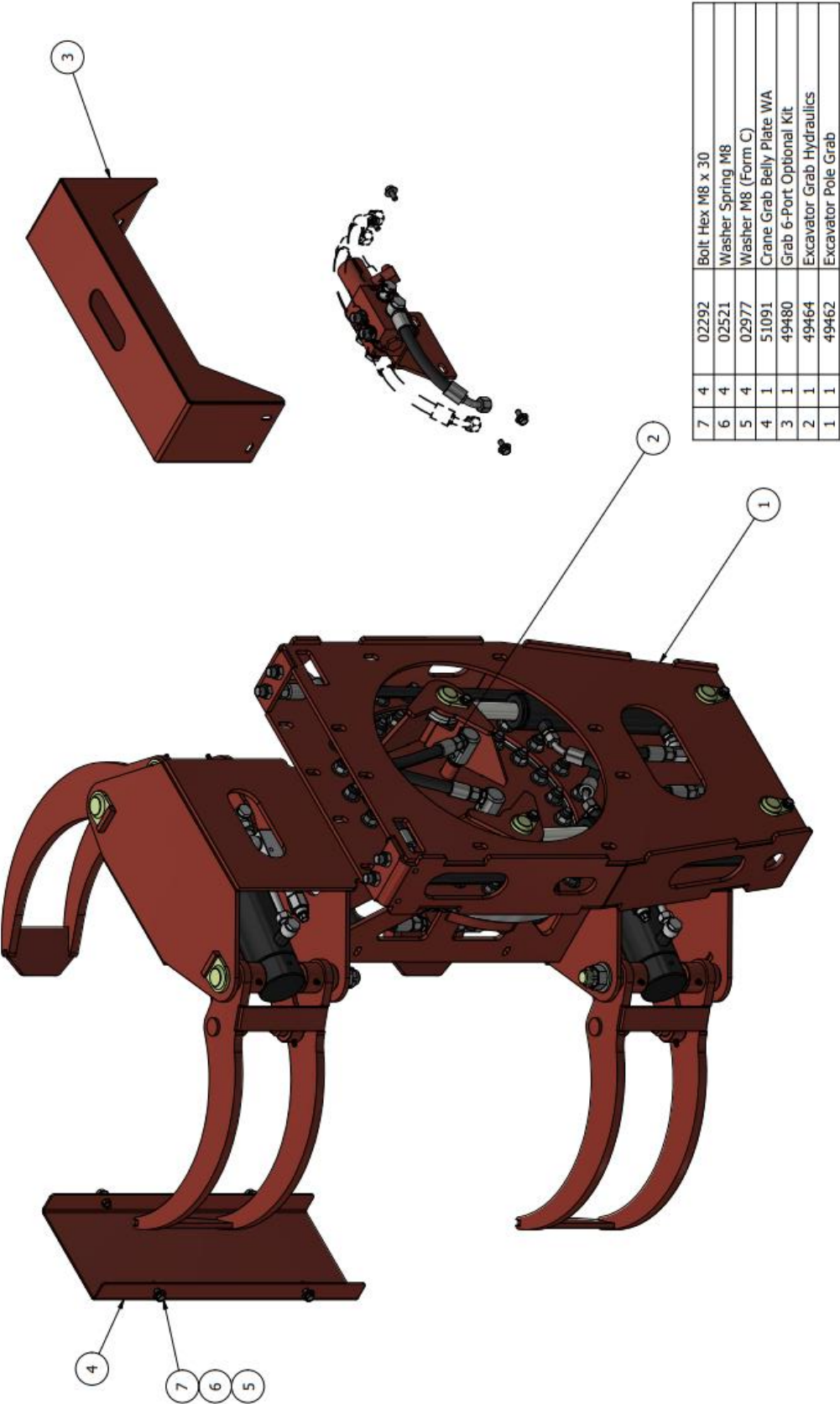
END OF LIFE

When the machine reaches the end of its useable lifetime it is important that the independent elements of the machine are reused, recycled or disposed of suitably.

Component	What to do?
Metals	All metals should be recycled with an appropriate scrap metal merchant, preferable sorted into metal type.
Electronics	All electronical components should be recycled at an appropriate facility according to the WEEE Directive and Regulations 2013
Oils	Oil waste is classed as Hazardous and therefore must be stored separately and according to legal regulations (that differ dependent on country). It must be disposed of by a suitable Waste Oil collection company.
Hydraulic Hoses	Hydraulic hoses should be drained of oil, metal ends removed and then recycled with a suitable specialist recycling company. Metal ends can be sent to metal recycling centers.
Plastics	All plastics should be sorted into recyclable and non-recyclable and then either sent to suitable recycling facilities or landfill.

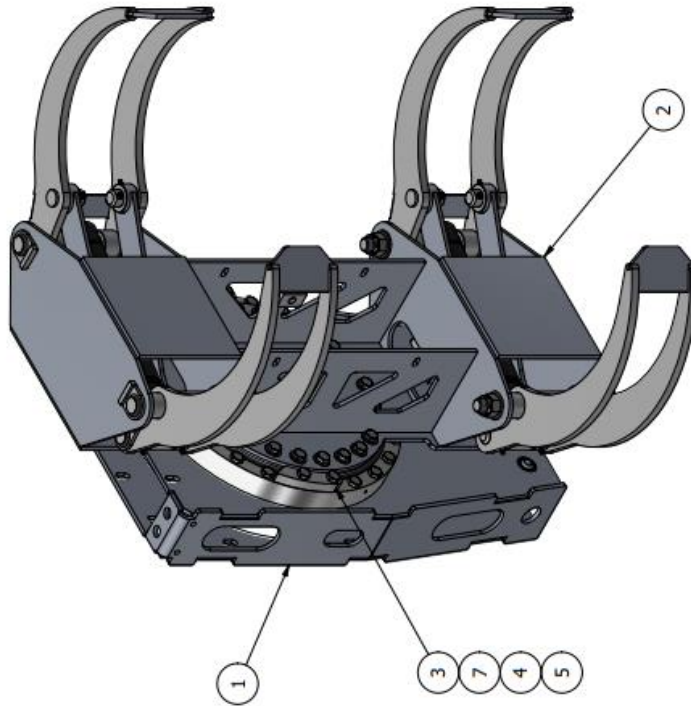
SPARE PARTS LIST

49463 - Pole Grab Top Level

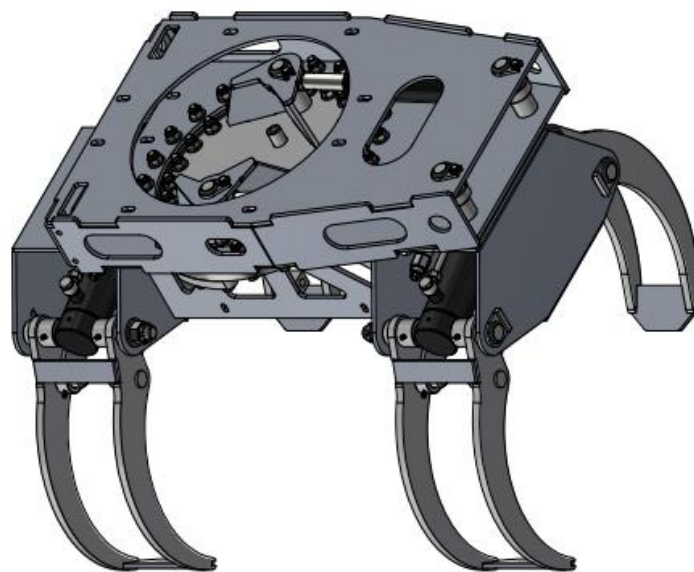


7	4	02292	Bolt Hex M8 x 30
6	4	02521	Washer Spring M8
5	4	02977	Washer M8 (Form C)
4	1	51091	Crane Grab Belly Plate WA
3	1	49480	Grab 6-Port Optional Kit
2	1	49464	Excavator Grab Hydraulics
1	1	49462	Excavator Pole Grab

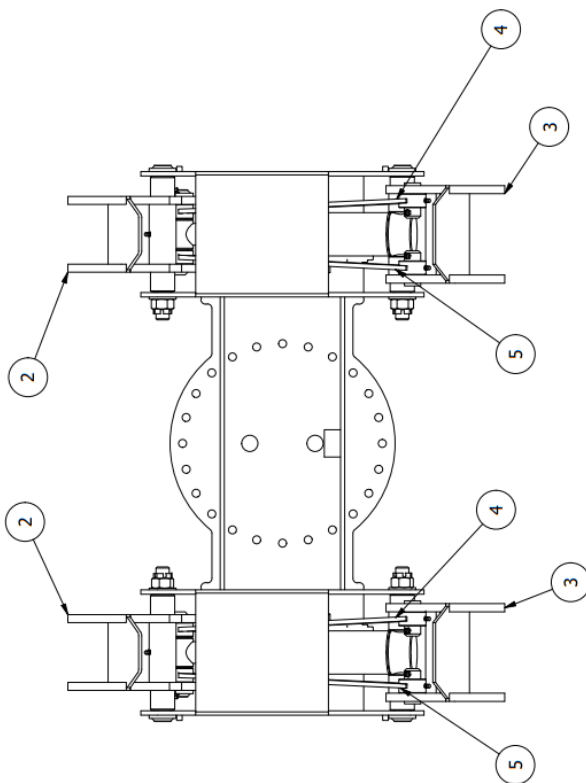
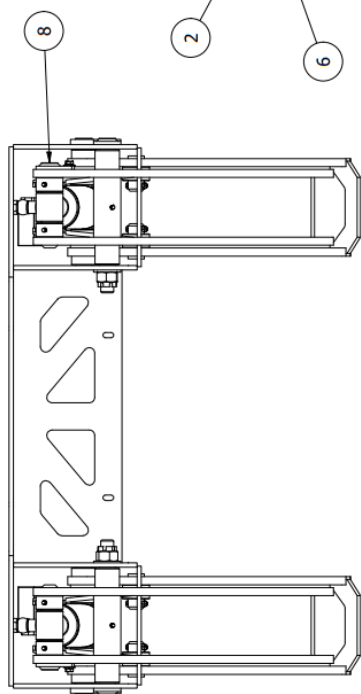
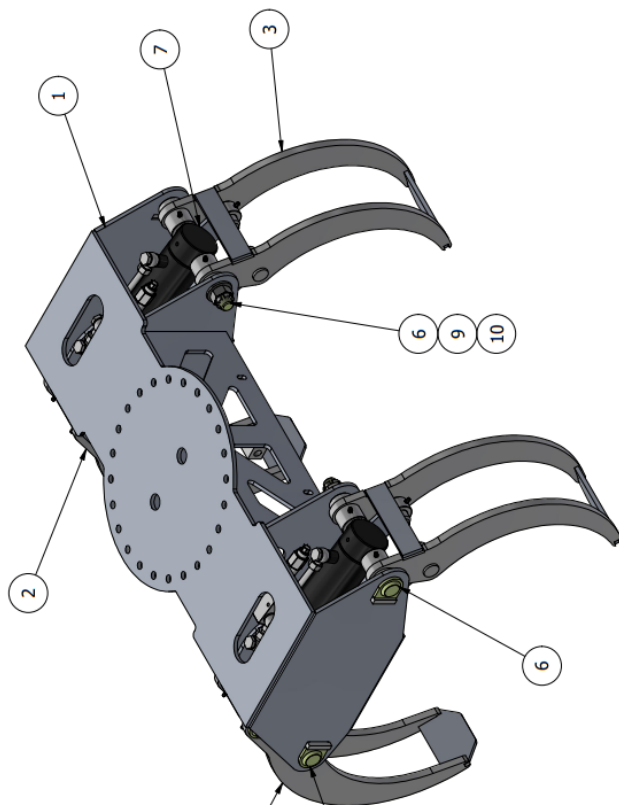
49462 – Excavator Grab



7	4	10877	Bolt Hex M14 x 100
6	32	03006	Nut Nyloc M14
5	60	03008	Washer M14 (Form C)
4	28	10786	Bolt Hex M14 x 90
3	2	49434	Limit Plate Bottom
2	1	49461	Twin Grab Assembly
1	1	49443	Excavator Rotator Assembly

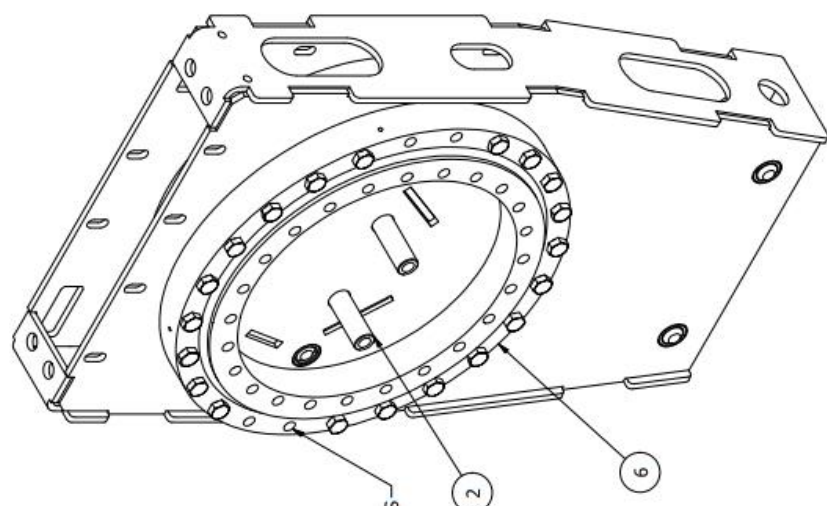
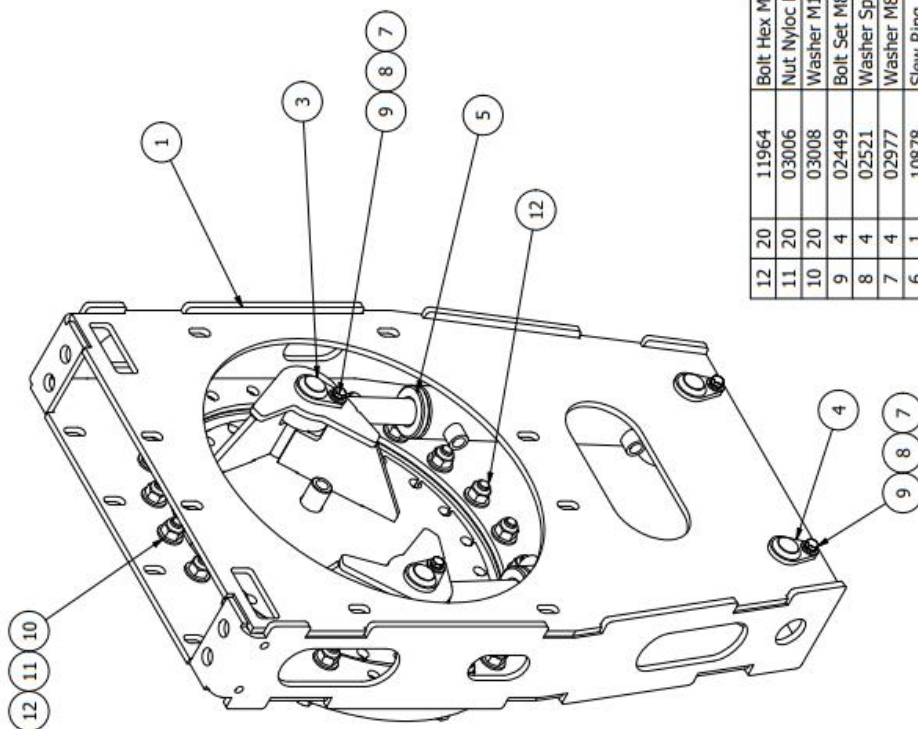


49461 – Twin Grab Assembly



16	14	02137	Nipple Grease M6x1
15	2	02977	Washer M8 (Form C)
14	2	02521	Washer Spring M8
13	2	02449	Bolt Set M8 x 20
12	4	02513	Nut Nyloc M6
11	4	02297	Bolt Hex M6 x 35
10	4	08298	Washer M24 (Form C)
9	4	12317	Nut Castellated M24
8	2	49445	Grab Rod Pin WA
7	2	49465	Excavator Grab Ram Assembly
6	4	49447	Grab Ram Butt Pin WA
5	2	49452	Grab Linkage Opposite WA
4	2	49451	Grab Linkage WA
3	2	49429	Outer Arm Left WA
2	2	49438	Inner Grab Arm WA
1	1	49427	Pole Grab Beam WA

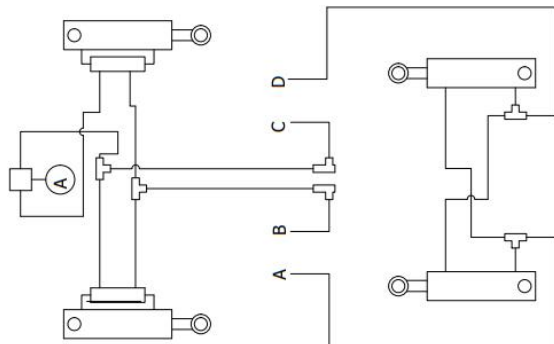
49443 – Excavator Rotator Assembly



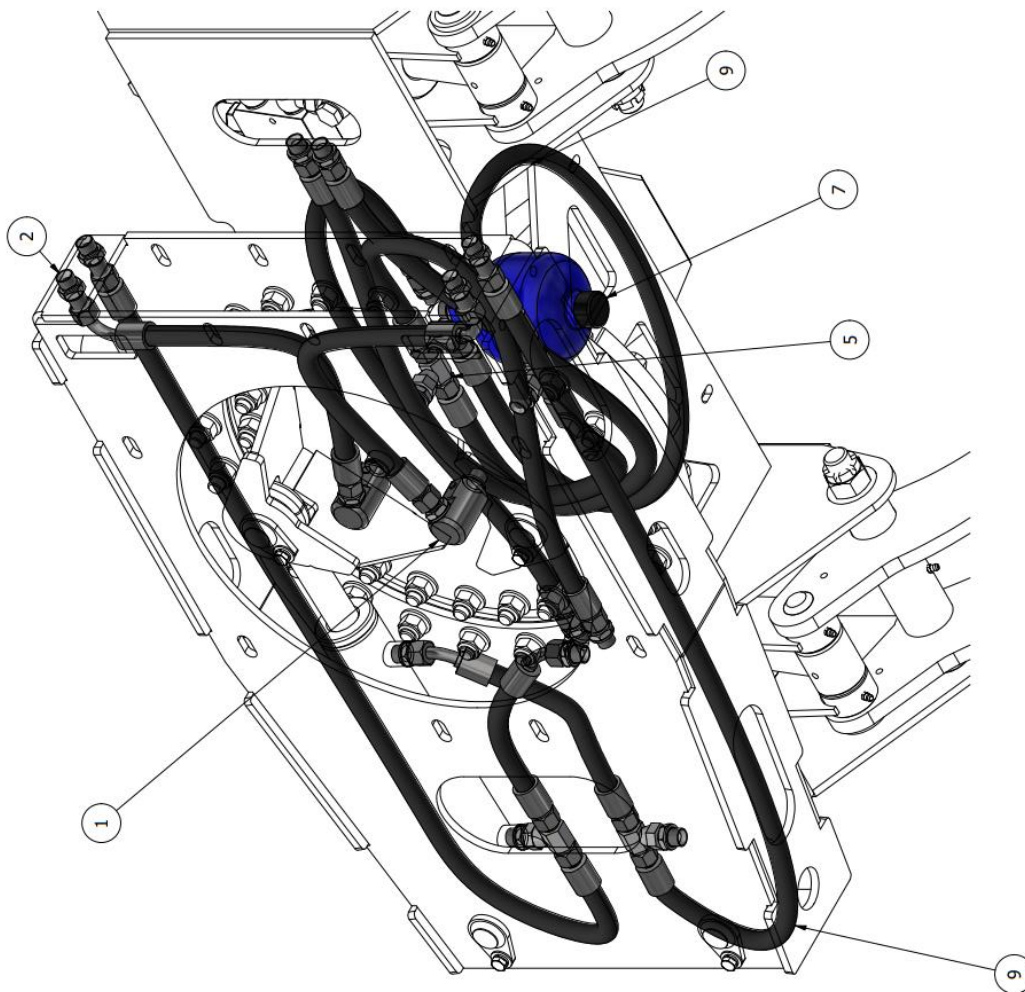
NOTE 4X MISSING BOLTS

12	20	11964	Bolt Hex M14 x 75
11	20	03006	Nut Nyloc M14
10	20	03008	Washer M14 (Form C)
9	4	02449	Bolt Set M8 x 20
8	4	02521	Washer Spring M8
7	4	02977	Washer M8 (Form C)
6	1	10878	Slew Ring
5	2	49750	Ram Swivel Ends
4	2	49416	Tilt Ram Butt Pin WA
3	2	49419	Rotate Rod Pin WA
2	1	49418	Rotating Centre WA
1	1	49450	Rotator Main Body WA

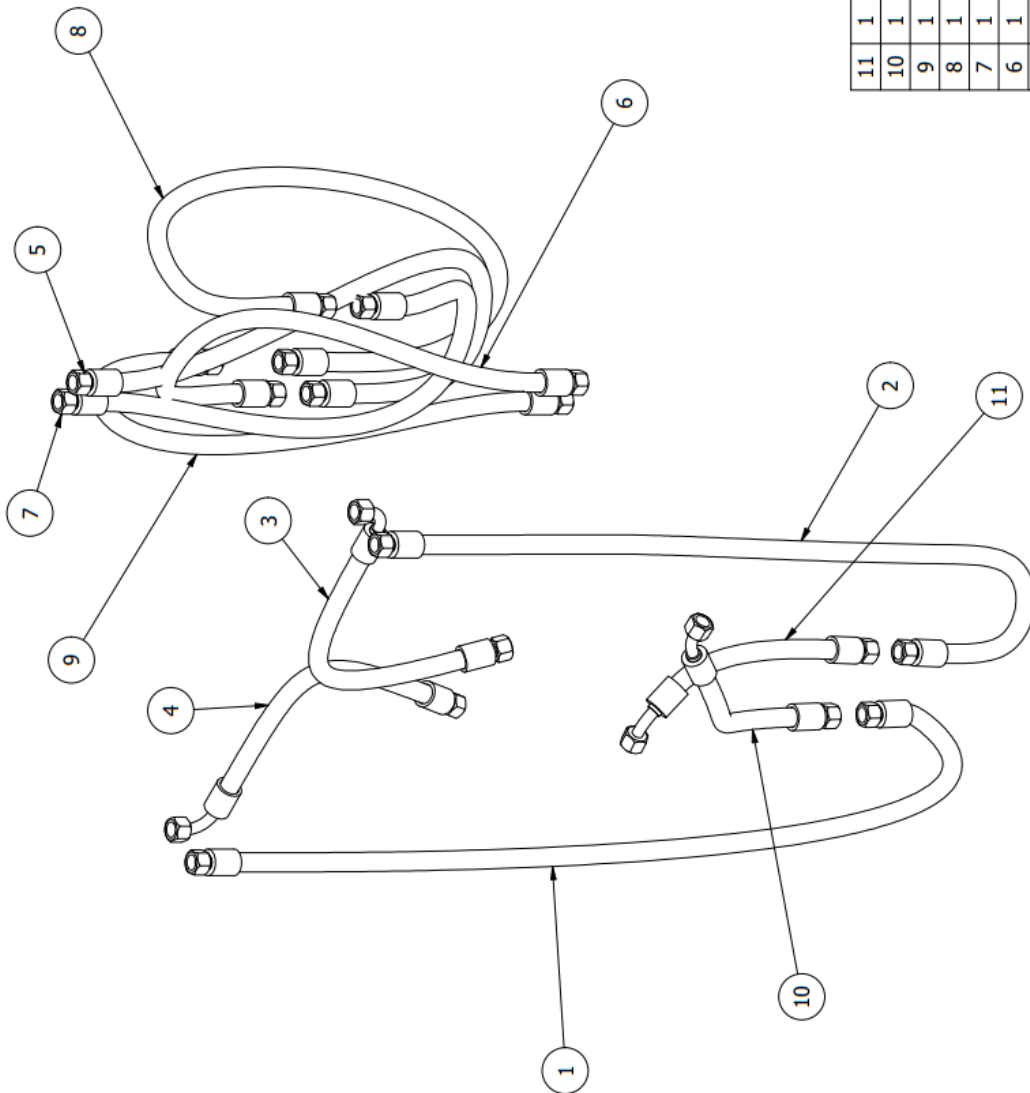
49464 – Excavator Grab Hydraulics



9	1	49476	Excavator Grab Hoses
8	1	02182	Seal Bonded 008
7	1	12471	Accumulator
6	1	01096	3/8"-1/2" MM Adaptor
5	4	01133	Tee 006 MMF BSP
4	14	01095	Adaptor 006 MM BSP
3	17	01812	Seal Bonded 006
2	4	02277	Bulkhead 006 MM BSP
1	2	10787	Swivel BSP 006 90 Deg



49476 – Excavator Grab Hoses



11	1	49494	Hose 11
10	1	49493	Hose 10
9	1	49486	Hose 9
8	1	49485	Hose 8
7	1	49484	Hose 7
6	1	49483	Hose 6
5	1	49482	Hose 5
4	1	49481	Hose 4
3	1	49479	Hose 3
2	1	49478	Hose 2
1	1	49477	Hose 1

RISK ASSESSMENT – EXCAVATOR MOUNTED POLE GRAB

Section 1: Assessment Information

Assessment Date	30/03/2022
Activity / Item / Area	Excavator Mounted Pole Grab
Person at Risk	Operator/User
Total Number of People at Risk	1+
Responsible Person	Crane Operative, Installation Operative
Assessor	Adam Sandey

Section 2: Likelihood/Severity of Injury

	Significant Risks	Likelihood	Severity	Residual Risk
1.	Injury caused by crushing	2	4	8
2.	Manual Handling	1	2	2
3.	Injury caused by rotation	2	4	8
4.	Injury caused by lifting	3	4	12
5.	Striking Utilities	2	5	10
6.	Falling Objects	3	4	12

		Severity				
		Minor	Serious	Major	Fatality	Multiple Fatalities
Likelihood	1	1	2	3	4	5
	Rare	1	1	2	3	4
Unlikely	2	2	4	6	8	10
Moderate	3	3	6	9	12	15
Likely	4	4	8	12	16	20
Certain	5	5	10	15	20	25

Low Risk	Moderate Risk	Significant Risk	High Risk
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Likelihood X Severity = Residual Risk

Section 3: Control Measures

1. Appropriate PPE to be worn including Hard Hat, Eye Glasses, Gloves and High Visibility Clothing.
2. Excavator operative to keep a clear line of sight with Excavator Mounted Pole Grab at all points.
3. Hands will be kept away from connecting parts. Connecting parts such as pins will be maintained in good order. Safety clips and other appropriate fittings will be fitted at all times.
4. Operators will ensure that all unauthorised persons are kept away from the work area, by bounding off the area if practicable. Excavator to be operated in no such way as to “swing” the pole if applicable and any other potential hazardous process.
5. All fittings to be kept in good working orders, checked for tightness and PPE will be worn when fitting, maintaining or repairing. Any faults will be reported and a record kept.
6. All users to have appropriate training to warn of potential hazards and on maintenance and how to use the equipment in a safe and effective behaviour.
7. All users to be trained in Manual Handling due to the weight of components.
8. Installation Operatives will familiarise themselves with the layout of the work area, will avoid working in poor or incomplete excavations and report any hazardous ground conditions to the Site Manager
9. All operators to be trained in machine use and safety prior to operation.
10. All hand tools will be kept in good order and only used for their design purpose. Faulty/broken/worn items will be replaced.
11. Operators are to be in possession of, have read and understood the machine and operation instruction manual.
12. The customer (or their appointed agent) is to have identified and marked out all known services within the vicinity of the work area. Operators will not carry out any works until the locations of any known services are made clear
13. Excavator Mounted Pole Grab is regularly inspected, maintained and serviced in accordance with manufacturer instructions.

Further Action Required

NO FURTHER ACTION REQUIRED

Prepared By

Adam Sandey
Autoguide Equipment



Autoguide Equipment
Stockley Road
Heddington
Nr. Calne
Wiltshire SN11 0PS
England
Tel: +44 (0) 1380 850885
Website: www.autoguide.co.uk

