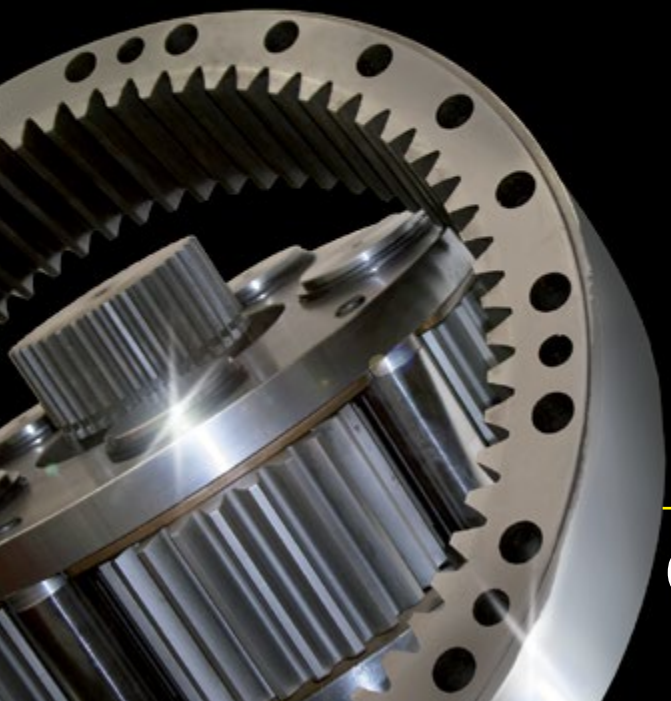


PD / SD

SINGLE SPEED HIGH POWERED DRIVES

OPERATORS MANUAL

PM-000145-A

CRITICAL - DO NOT CONNECT OR OPERATE YOUR DRIVE UNIT WITHOUT FIRST HAVING READ AND UNDERSTOOD THIS STATEMENT

Your Digga Planetary Drive Gearbox is a high performance product that is designed for augering (drilling), Screw Anchoring (Pier) installation, Core Barreling or other applications where it is seeing high pressure. To avoid premature wear and failure, and to fulfill your terms of warranty please read this statement.

All high powered **PD** and **SD** drives must have a first oil change within the **first 30hrs (extreme use) or 50hrs (Moderate use) or 3mths** (which ever comes first) to ensure the bed in of the drive unit. For more detailed information please read page 32 - 33.

If the first oil change is not performed within this period excessive wear within the gearbox will occur that will cause premature failure. All Warranty will be void.

Oil must then be changed thereafter every 300/500hrs and a full service every 12mths must be performed by an authorised service agent to ensure Warranty requirements are met.

In the event of a failure under the warranty period:

- Contact Digga immediately, **DO-NOT DISASSEMBLE YOUR DRIVE** without first obtaining written permission and instructions from Digga.
- Proof of service must be provided in hard copy form of both operational and service history (including serial number of gearbox and hydraulic motor) records. Service must be performed by an **authorised Digga service agent**.

2 TABLE OF CONTENTS

THANK YOU

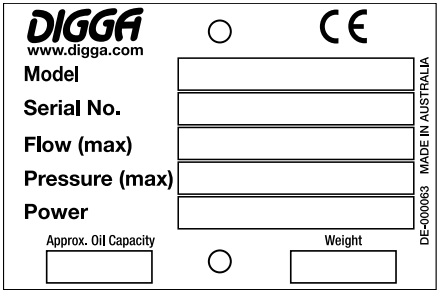
Congratulations on the purchase of your new High Performance DIGGA Planetary Drive. This product was carefully designed and manufactured to give you years of dependable service. It is mandatory that oil changes are performed at the specified interval to keep it in top working condition (maintenance - Chapter 12).

Complete manual must be read and understood before connecting and operating. Be sure to observe all safety precautions and maintenance procedures as described in this manual.

ABOUT THIS MANUAL

This manual has been designed to help you do a better, safer job. **Read this manual carefully and become familiar with its contents before connecting and operating.**

Remember; never let anyone operate this unit without reading the “Safety Precautions” and “Operating Instructions” sections of this manual. Unless noted otherwise, right and left sides are determined from the position of the machine operator when facing forward.



SAFETY ALERT SYMBOL

This is the “Safety Alert Symbol” used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and for the safety of others working with you.

4 SERVICE & PREPARATION FOR USE

Your Digga Auger Drive is a **user non serviceable part. Unauthorised disassembly will void warranty.** All service and warranty must be performed by an authorised DIGGA service agent. Contact your local Digga dealer for details.

To facilitate warranty or service, record the model and serial number of your unit in the space provided on this page. This information may be obtained from the identification plate located on the product. The serial tag is located on the top of the hood, between the hood ears

MODEL_____

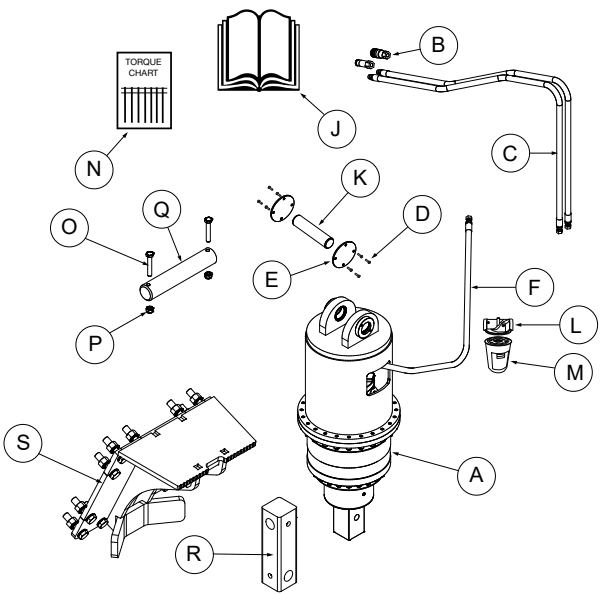
SERIAL NUMBER_____

DATE PURCHASED_____

The parts department needs this information to ensure accurate parts can be sent to the authorised service agent.

MODELS COVERED IN THIS MANUAL	
PREMIUM DRIVES (PD)	**SUPA DRIVES (SD)**
PD 30 HP-7 (STANDARD) **PD 30 HP-7-RV (WITH RELIEF VALVE) (OPTIONAL)** **PD 30 HP-7-SV (WITH ENERGY CONTROL VALVE "ECV") (OPTIONAL)**	**SD 45 HP-7 (STANDARD)** **SD 45 HP-7-RV (WITH RELIEF VALVE) (OPTIONAL)** **SD 45 HP-7-SV (WITH ENERGY CONTROL VALVE "ECV") (OPTIONAL)**
	SD 55 HP-7 (STANDARD) **SD 55 HP-7-RV (WITH RELIEF VALVE) (OPTIONAL)** **SD 55 HP-7-SV (WITH ENERGY CONTROL VALVE "ECV") (OPTIONAL)**

To avoid any inconvenience before operation, please check that you have received the following items which you have ordered. Items may differ depending on type of machine the Drive units are to be fitted to.



REF	DESCRIPTION	QTY	SINGLE SPEED
A	DRIVE UNIT-NO LINKAGE	1	●
B	QUICK RELEASE COUPLERS	set	Optional
C	HYDRAULIC HOSE KIT	set	Optional
D	BOLT (SUPA DRIVE ONLY)	8	●
E	HOOD COVER (SUPA DRIVE ONLY)	2	●
F	3M CASE DRAIN HOSE & FITTINGS	1	●
J	OPERATORS MANUAL	1	●
K	PIN (SUPA DRIVE ONLY)	1	●
L	CASE DRAIN FILTER HEAD	1	Optional
M	CASE DRAIN FILTER ELEMENT	1	Optional
N	TORQUE CHART	1	●
O	BOLT (PREMIUM DRIVE ONLY)	2	●
P	NYLOC NUT (PREMIUM DRIVE ONLY)	2	●
Q	PIN (PREMIUM DRIVE ONLY)	1	●
R	LINKAGE	1	Optional
S	RYNO HITCH	1	Optional

5 SAFETY PRECAUTIONS - GENERAL INFORMATION

TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY OR OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.

THIS SYMBOL MEANS:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

SIGNAL WORDS: Note the use of signal words DANGER, WARNING, and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines:

DANGER: Indicates an imminently hazardous situation, which if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components which, for functional purposes, cannot be guarded.

WARNING: Indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices and indicate potential failure or damage to equipment.

CAUTION: Indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

This section is composed of various warnings and safety tips. **Read and learn all the information in this section before you attempt to use your attachment.** Also read your machines owner's manual before using your equipment. This knowledge will help you operate your unit safely. **Do not take this information lightly, it is presented for your benefit and for the benefit of others working around you.**

The "Safety Alert Symbol"  will be used throughout this manual. It will appear with the word **DANGER, WARNING,** or **CAUTION**, and a safety message pertaining to the specific topic being covered. Take the time to read these messages as you come across them.

WARNING

KNOW WHERE UTILITIES ARE

Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call DIAL BEFORE YOU DIG ON 1100 (in Australia), or your local UTILITIES location service provider for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

WARNING

EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA DUST ALONG WITH OTHER HAZARDOUS DUSTS MAY CAUSE SERIOUS OR FATAL RESPIRATORY DISEASE.

It is recommended to use dust suppression, dust collection and if necessary personal protective equipment during the operation of any attachment that may cause high levels of dust.

WARNING

REMOVE PAINT BEFORE WELDING OR HEATING

Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do all work outside or in a well ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating. When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

WARNING

END OF LIFE DISPOSAL

At the completion of the useful life of the unit, drain all fluids and dismantle by separating the different materials (rubber, steel, plastic, etc.). Follow all federal, state and local regulations for recycling and disposal of the fluid and components.

WARNING

OPERATING THE PLANETARY DRIVE

- An operator must not use drugs or alcohol, which can change his or her alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate equipment.
- All bystanders should be kept a minimum of 20 feet (6 meters) away from the working area of the drive.
- Do not allow Site workers to climb or ride on a drill mast, Planetary Drive, Auger or Auger Extension at any time, including while stationary, in operation or being moved or rotated.
- Operate only from the operator's station.
- Avoid steep hillside operation which could cause the machine to overturn. Consult your machines operator's and safety manuals for maximum incline allowable.

WARNING

- Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.
- Travel only with the planetary drive in a safe transport position to prevent uncontrolled movement. Drive slowly over rough ground and on slopes.
- Tether any auger, anchor or extensions connected to the drive with a chain if necessary, to prevent uncontrolled swinging of the attachments when moving from position to position.
- Do not drive close to ditches, excavations, etc., cave in could result.
- Before exiting the machine, lower the attachment to the ground, apply the parking brakes, turn off the prime mover's engine, and remove the key.
- Flow and pressure gauges, fittings, and hoses must have a continuous operating pressure rating of at least 25% higher than highest pressures of the system.
- Do not smoke when refueling the prime mover. Allow room in the fuel tank for expansion. Wipe up any spilled fuel. Secure cap tightly when done.

WARNING

- Remove the auger drive from the prime mover before transporting to and from the job site.
- Planetary Drives shall be used only for their designed intent and shall not be loaded beyond their rated capacity. Overloading or exceeding the manufacturers specifications will void all warranty.

WARNING

OPERATING THE PLANETARY DRIVE CONT....

- Drill stem rotation must be stopped before adding or removing sections, or making adjustments to the drill stem or sampling equipment.
- Augers shall be cleaned only when the rotating mechanism is in neutral and the auger stopped; long-handled shovels shall be used to move cuttings from the auger. Materials heavier than 10kgs must be moved mechanically or by using at least two people.
- Drilling operations must be stopped in the event of local thunderstorm, or lightning activity. During operation, weather conditions shall be monitored: operations shall cease during electrical storms or when electrical storms are imminent.
- Open bore holes must be capped and flagged.

WARNING

STORAGE OF THE PLANETARY DRIVE

- Seal hydraulic couplers from contaminants and secure all hydraulic hoses off the ground to help prevent damage.
- Clean the unit thoroughly, removing all mud, dirt, and grease.
- Inspect for visible signs of wear, breakage, or damage. Order any parts required and make the necessary repairs to avoid delays upon removal from storage.
- Check that drive unit motor and hoses are full of clean oil and planetary is full.
- Coat liberally with grease the output shaft and collar, extension shaft and collar, and all connecting pins to prevent rust and reduce wear.
- Tighten loose nuts, capscrews and hydraulic connections.
- Replace decals that are damaged or in unreadable condition.
- Store unit in a dry and protected place. Leaving the unit outside will materially shorten its life.

WARNING

GROUND PERSONNEL AND BYSTANDERS

- Be alert to others in the work area. Be sure others know when and where you will be working. Make sure no one is behind equipment or within 6 metres of it operating.
- Loose fitting clothing, long hair, jewellery and equipment which might become entangled in moving equipment are prohibited while working near Auger Drills or Anchoring equipment.
- Operators, helpers, and other personnel working near Auger Drills, Anchoring equipment or Core Barrels must wear steel-toe safety shoes, safety glasses, and hard hats as a minimum. Hearing protection, respirators, and personnel protective clothing will be specified in the site-specific Health and Safety Plan.

WARNING

MAINTAINING THE PLANETARY DRIVE

- Before performing maintenance, lower the attachment to the ground, apply the parking brakes, turn off the engine, and remove the key.
- Drill rigs must be shut down and properly locked-out and tagged before repairs or maintenance is performed. Only properly trained and qualified individuals are permitted to perform repairs and maintenance.
- Never adjust a relief valve for pressure higher than recommended by the machine's manufacturer.

WARNING

TRANSPORTING

Follow all local government regulations that may apply along with recommended tie down points and any equipment safety precautions at the front of this handbook when transporting your attachment.

WARNING

TIE DOWN POINTS

- Tie down points are identified by tie down decals where required. Securing to trailer at other points is unsafe and can damage attachment.
- Do not attach tie down accessories around cylinders or in any way that may damage hoses or hydraulic components.
- Attach tie down accessories to unit as recommended.
- Check unit stability before transporting.

Verify that all tie down accessories (chains, slings, ropes, shackles etc.) are capable of maintaining attachment stability during transporting and are attached in such a way to prevent unintended disengagement or shifting of the unit. Failure to do so could result in serious personal injury or death.

TO THE OPERATOR

The primary responsibility for safety with this equipment falls to the operator. Make sure that the equipment is operated only by trained individuals that have read and understand this manual. Don't hurry the learning process or take the unit for granted.

It is the skill, care, common sense, and good judgement of the operator that will determine how efficiently and safely the job is performed. Know your equipment before you start. Know its capabilities and how to operate all the controls.

Visually inspect your equipment before you start, ensure correct assembly and installation of the attachment and never operate equipment that is not in proper working order.

Practice the operation of your new attachment and become familiar with the controls and the way it handles on your machine. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.

1. Never operate the Attachment without first reading and understanding the entire operator's manual.
2. Do not paint over, remove or deface any safety signs or warning decals on your equipment.
3. Follow all safety decals. Keep them clean and replace them if they become worn, damaged or illegible.
4. Know your equipment inside and out. Know how to operate all controls and know emergency shut down procedures.
5. Keep all stepping surfaces, pedals, and controls free from dirt, grease and oil. Keep equipment clean to help avoid injury from slipping or a fall when getting on or off equipment.
6. Operate the attachment only in daylight or with sufficient artificial light.
7. Always carry loads close to the ground. Do not step off machine platform with load raised.
8. Turn off engine before performing maintenance. All maintenance can be performed with the machine arms lowered. If lift arms must be left raised for any reason, use a positive lift arm lock to secure the arms in place. Serious damage or personal injury could result from lift arms accidentally lowering.
9. Do not exceed rated operating capacity of the host machine, as machine may become unstable resulting in loss of control.
10. Always lower the loader arms or machine boom to the ground, shut off the engine and remove the key before getting off the unit.
11. Never use the Drive Unit on a machine that is not equipped with a cab or ROPS, FOPS and operator restraints (seat belts or equivalent devices).

6 SAFETY - WORKING WITH THE ATTACHMENT

WHEN DEALING WITH HYDRAULICS DURING ANY TYPE OF ASSEMBLY, OPERATION, MAINTENANCE, OR OTHER WORK ON OR NEAR THIS PRODUCT

- Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible!
- If any fluid penetrates the skin, GET IMMEDIATE MEDICAL ATTENTION!!
- Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks. DO NOT USE YOUR HANDS!
- Before connecting or disconnecting hydraulic hoses, read your machine or power unit's operator's manual for detailed instructions on connecting and disconnecting hydraulic attachments.
- Make certain that all parts meet the specifications for this product when installing or replacing hydraulic hoses or fittings.
- After connecting hydraulic lines:
  - Slowly and carefully raise the loaders arm/s and cycle the rollback / dump cylinders to check hose clearances and to check for any interference.
  - Operate the hydraulics on this product to ascertain forward and reverse.
  - Make certain that the hoses cannot interfere with or actuate the quick-attach mechanism.
  - Make certain that hoses will not be pinched, or get tangled, in any equipment.
- Do not lock the auxiliary hydraulics of your power unit in the "ON" position.
- Refer to your power unit's operator's manual and this manual for procedures and intervals, then inspect and maintain the entire hydraulic system to insure that the fluid remains clean, that all devices function properly, and that there are no fluid leaks.

WHEN MOUNTING THIS PRODUCT TO YOUR MACHINE

- Refer to the operator's manuals of your machine, and your quick-attach for special or detailed mounting instructions.
- This product should fit onto the quick-attach Frame or Hitch (Machine Mount).
- If this product does not fit properly, contact your Digga Dealer before operating.
- Never place any part of your body into the mounting plate, frame, hitch or loader holes. A slight movement of the power unit and this product could cause serious injury.
- Where 'Dead Man' connections are connected or installed it is illegal to disengage, tamper with or remove them.

WHEN ADJUSTING, SERVICING OR REPAIRING THIS PRODUCT

- Make no modifications to your Drive Unit.
- When making repairs use only authorised Digga service agents, use only genuine Digga parts for the gearbox. For fasten ers, hydraulic hoses, or hydraulic fittings, use only properly rated parts.
- Replacement parts must also have safety signs attached.

For additional safety information please see Risk Management booklet. To obtain a copy contact Digga Head Office on +61 7 3807 3330

7 BEFORE USE

The key feature of your Digga Auger Drive is low maintenance. It contains no user serviceable parts, unauthorised disassembly will void warranty. WRITTEN PERMISSION FROM DIGGA MUST BE OBTAINED before performing any disassembly.

SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS BEFORE BEGINNING ANY DRIVE UNIT MAINTENANCE.

BEFORE FIRST USE

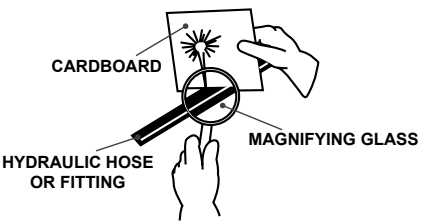
- Inspect the attachment for shipping damage. If damage does exist, do not operate until the damaged parts have been replaced or repaired.

BEFORE EACH USE

- Make sure that all nuts and bolts are in place and properly tightened.
- Make sure that all other fasteners are in place and are performing their specified function.
- Make sure that all hydraulic fittings are tightened and that there are no leaks in any fittings or hoses.
- Make sure that all safety signs are in place, are clean, and are legible. (SEE THE SAFETY SIGN SECTION)
- Check for any oil leaks.
- Wear and tear on pins, linkages, clips, bushes and hood.
- Ensure any damage or excessively worn parts are replaced.
- Always wear safety goggles or glasses when inspecting equipment.

WARNING!

If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research it immediately to determine proper treatment.



Escaping fluid under pressure can have sufficient force to penetrate the skin causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands to search for suspected leaks. Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.

Commissioning Procedure for SAI TF2.5 (single speed) hydraulic motors.

NOTE: BEFORE THE DRIVE UNIT IS EVEN CONNECTED TO THE EXCAVATOR ENSURE THAT THE DRIVE IS FULL OF HYDRAULIC OIL AND THE GEARBOX IS FULL OF GEAR OIL.

All Digga planetary drive units are despatched from the factory full of fluids (hydraulic and gearbox oil) unless this warning decal is attached.

The decal is only applied in special circumstances, for example if a drive unit needs to be air-freighted to the customer. Air transportation regulation prohibits certain fluids from being air-freighted.

If there are no fluids in the drive unit at the time of despatching, then the decal DE-000127 will be applied to the drive unit.

DE-0000127

1. Once you have determined if the drive unit has gearbox oil in or requires oil, ensure that the correct grade and quantity of oil is installed. DO NOT RUN THE DRIVE UNIT WITHOUT OIL. Connect the hydraulic hoses to the excavator. If the customer has ordered the optional Pressure Differential Kit and the Diggalign Kit, then there will be 2 electrical harness to connect. When looking into the access hole in the hood, the hose to connect to the V1 port on the valve block or manifold is the inlet hose (LHS). The hose to connect to V2 port of the valve block is the outlet hose (RHS). (See Diagram on page 19 and page 20).

2. The case drain hose is already fitted to the hydraulic motor and needs to be connected to the hydraulic line which returns to the hydraulic tank of the excavator.

NOTE: ENSURE THAT THE CASE DRAIN HOSE IS CONNECTED TO THE RESERVOIR OF THE EXCAVATOR. IT IS IMPORTANT THAT THE PRESSURE IN THE CASE DRAIN HOSE IS NOT READING MORE THAN 100PSI WHILST OPERATING AND THAT A CONSISTENT TRICKLE OF HYDRAULIC OIL IS BEING RETURNED TO THE EXCAVATOR RESERVOIR. INTERMITTENT AND SPURTS OF FLOW FROM THE CASE DRAIN HOSE ARE NOT STANDARD DESIGN SYMPTOMS. PLEASE CONSULT A DIGGA DEALER OR DIGGA AUSTRALIA SERVICE IF THIS OCCURS.

⚠CAUTION

DO NOT OPERATE UNIT WITHOUT CASE DRAIN HOSE CONNECTED

DE-000126

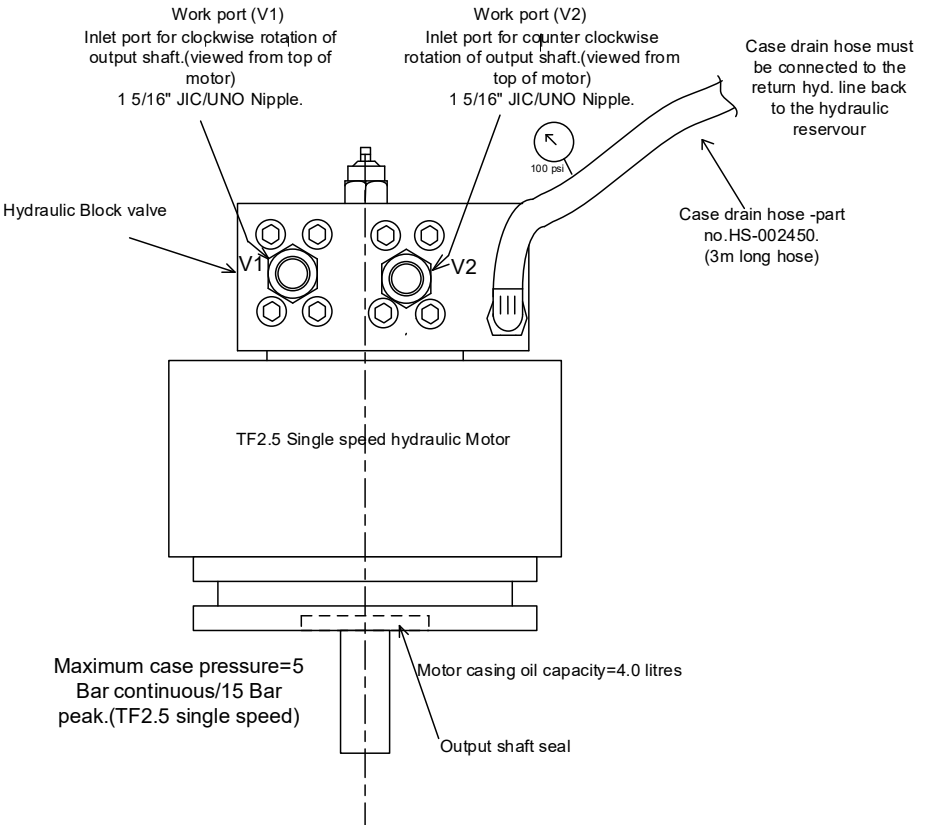
NOTE: TO ENSURE BEST MOTOR LIFE, RUN MOTOR FOR APPROXIMATELY ONE HOUR AT 30% OF RATED PRESSURE BEFORE APPLICATION TO FULL LOAD. BE SURE THAT MOTOR AND GEARBOX ARE FULL OF FLUIDS PRIOR TO START UP.

NOTE: All Single Speed High Powered planetary drive units use Castrol Alphasyn EP320 (standard) Synthetic gearbox oil for operating in tropical ambient temperatures. See maintenance section in the operators manual on gearbox oil level checking as well as the alternate gearbox oils recommended for cold climate conditions. Digga produce high powered drive units with three different gearset ratios. See the maintenance section for gearbox volume and checking/topping up the gearbox oil.

NOTE: WHEN PROCURING ANY HOSE ASSEMBLIES FOR USE ON YOUR DIGGA PLANETARY DRIVE UNIT ENSURE THAT THE MAX OPERATING PRESSURE OF THE HOSES IS ALWAYS HIGHER THAN WHAT THE EXCAVATOR OR MACHINE (WHICH THE PLANETARY DRIVE UNIT WILL BE USED ON) CAN PRODUCE.

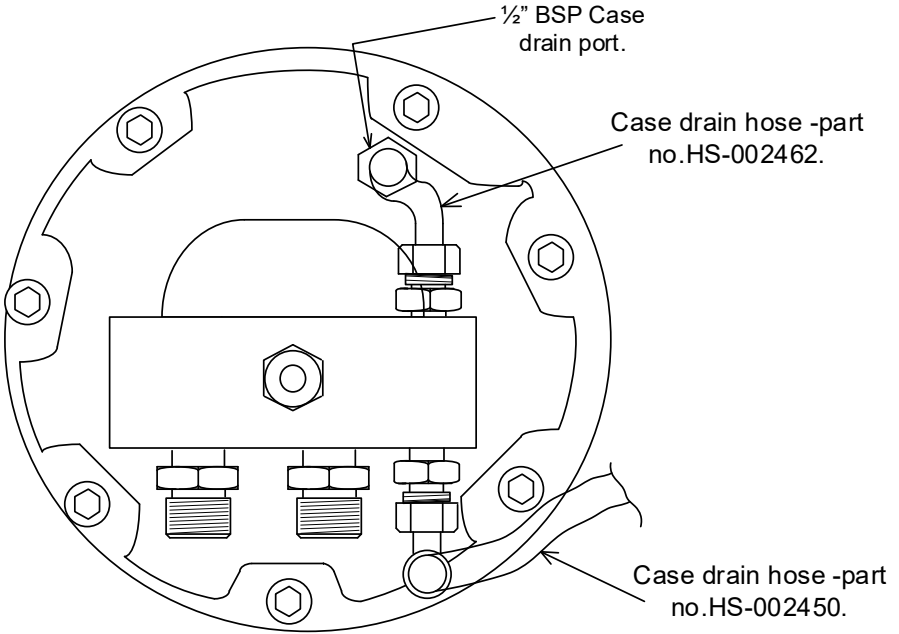
PD30HP/SD45HP/SD55HP SHOWN (WITH RELIEF VALVE) PRESSURE RELIEF SETTING = 345 BAR

DIAGRAM 1 OF 2 – PORT VIEW



PD30HP/SD45HP/SD55HP SHOWN (WITH RELIEF VALVE) PRESSURE RELIEF SETTING = 345 BAR

DIAGRAM 2 OF 2 – TOP VIEW



INSTALLING YOUR HIGH PERFORMANCE PLANETARY DRIVE

1. Remove the shipping banding from around the attachment.
2. ENSURE YOU HAVE READ THE SERIAL TAG ON THE DRIVE UNIT TO OBTAIN THE MAX FLOW AND PRESSURE RATINGS. Ensure your machine flow and pressure settings are aligned with the requirements of the drive unit. NEVER EXCEED THE MAX FLOW AND PRESSURE RATINGS AS WARRANTY WILL BE VOID.
3. Follow all standard safety practices and the instructions for installing an attachment as shown in your machine operator's manual.
4. Lower the unit to the ground and remove any attachments from the front of the host machine.
5. Attach the quick attach mounting frame or hitch to the host machine as per the manufacturers specifications. Ensure the locking mechanisms on the machine are engaged & the attachment is secure.

NOTE: IT IS IMPORTANT TO MAKE SURE THE LOCKING MECHANISM ON YOUR QUICK ATTACH IS ENGAGED, THEREFORE LOCKING THE ATTACHMENT ONTO THE MACHINE.

6. Relieve any pressure from the auxiliary hydraulic system and after making sure there is no foreign matter on the hydraulic couplers, connect the power and return couplers to the auxiliary hydraulic system of your machine. The list below shows the most common places to "tap" into the hydraulic system on various types of machines.

- BACKHOES & EXCAVATORS - Auxiliary hydraulic outlets or bucket curl cylinder circuit.
- WHEEL LOADERS - Auxiliary hydraulic outlets or bucket tilt (dump) cylinder circuit.

7. Route the hoses in such a fashion as to avoid pinching or chafing. Be sure the two hydraulic hoses are long enough to perform at the full range of the auger drives operating motion. HIGH PRESSURE HOSES A & B - Route the hoses in such a fashion as to avoid pinching or chafing.
8. The hydraulic block valve with pressure relief has 2 capped SAE 1 $\frac{5}{16}$ threaded fittings onto the motor manifold. We recommend that high pressure hoses A & B should be custom made and fitted by a Qualified Hose Assembler/Fitter. We also recommend the use of hoses rated to at least (350 Bar/5000 psi) working pressure. Hose size is determined by Machine flow rate and should be calculated by the Qualified Hose Assembler/Fitter. Hoses A & B are normally connected to the Auxiliary lines on the parent machine.

9. Connect the case drain to the case drain on your machine. If your machine has a case tap, ensure the case tap is turned on. Failure to connect the case drain will severely damage the motor and void all warranty. The Case Drain hose is already fitted to the unit Hydraulic motor and must be unravelled. This Case drain hose must return directly to Hydraulic Oil Reservoir on the Parent machine. There can be no valving or restrictions in the line and the hose must be minimum ½" ID. The loose end of this case drain line must have a fitting fitted to match the fitting on the Parent machine.

WARNING: ENSURE THAT THERE ARE NO QUICK RELEASE COUPLERS IN THE CASE DRAIN LINE OR T-CONNECTORS. OPERATION WITHOUT CASE DRAIN WILL CAUSE MOTOR FAILURE

10. VARIABLE FOOT CONTROL - Host machines used to power High Powered PD and SD Drive units must have their Auxiliary Circuit controlled with a variable foot control. This foot control gives the operator the ability to ease the power on and off avoiding shock loading which will cause potential expensive damage to the Hydraulic motor and Gearbox.

11. FILTRATION/CONTAMINATION - All High Powered PD and SD Drive units are fitted with Piston Hydraulic Motors which require filtration of 10 micron fitted to both A & B pressure hoses. We recommend these filters be permanently fitted to the Drive unit so any contamination entering the system while connecting/disconnecting hoses is caught before entering the hydraulic motor.

12. With the unit lying horizontally on the ground connect the auger, screw anchor or extension or core barrel. ENSURE THE AUGER PIN AND SAFETY CLIP ARE INSTALLED CORRECTLY. The machine is now ready for use.

13. If augering, check the auger teeth and pilots are not worn. Ensure all worn parts are replaced. Worn parts will become ineffective and severely diminish the overall performance of the Planetary Drive and Auger.

PLEASE NOTE: ALTERING, TAMPERING OR DISMANTLING ANY PART OF THE DIGGA UNIT WITHOUT WRITTEN PERMISSION FROM DIGGA WILL VOID ANY WARRANTY.

COLD WEATHER STARTUP INFORMATION

The information that is contained on this page is an aid to the operation and maintenance of your Digga High Powered Planetary Drive Unit in cold weather. When you operate the host machine in temperatures from 9 °C (48 °F) to −40 °C (−40 °F) refer to the Operation and Maintenance Manual of your machine. It is difficult to outline the operation and maintenance of a machine that is used in freezing temperatures for a general publication. The difficulty in outlining the requirements is caused by the following conditions:

- The unlimited differences in weather conditions
- Applications
- And the supplies that are available in your area

In order to provide the best possible guidelines, use the information in this document and the following criteria:
varying factors, recommendations from your Machinery dealer, and past proven practices.

HINTS FOR COLD WEATHER

Make sure that you read the information for selecting the correct gearbox oils for use in cold weather. Refer to page 33 for detail.
Prepare the machine for the weather conditions as instructed In your machines operator manuals.

PROCEDURE FOR STARTUP IN COLD WEATHER

- Your Digga Planetary Drive System is designed to operate within air temperature of 5°C (41°F) and 30°C (86°F).
- For temperatures below 5°C (48°F) it is recommended to slowly start the drive under no load, at minimum speed. This will allow warm hydraulic oil from your host machine to circulate through the hydraulic motor of your drive and slowly bring it to the minimum recommended operating temperature of 5°C (48°F).
- Once the minimum temperature has been achieved it is recommended to slowly introduce load to the output of the drive unit, which in turn will increase the internal gear oil temperature.

N.B. The host machines cooling system and the lubrication system for the engine do not lose heat immediately upon shutdown.The transmission and the hydraulic system lose heat more rapidly because of more exposed areas. The Planetary Gearbox & Motor cases cool rapidly, since the cases do not operate as warm as other compartments. Therefore, after any period of down time on the machine, ensure you achieve full operating temperatures through following start up instructions. Thick oil can also cause high case pressures which in turn cause shaft seal problems.

OPERATING PROCEDURES - AUGERING

YOUR DIGGA HIGH PERFORMANCE PLANETARY DRIVE IS SPECIFICALLY DESIGNED FOR DRILLING AND ROTATIONAL OPERATION ONLY, IT IS NOT A LIFTING DEVICE !

INTENDED USE

This unit is designed for drilling vertical holes, core barreling or rotating piers into the ground. Use in any other way is considered contrary to the intended use.

After all installation instructions have been completed, safety information read and understood, and the rest of this operator's manual has been reviewed, your DIGGA Auger Drive is now ready for use.

1. With the auger raised off the ground and the vehicle engine set at a low RPM, activate the host machines drive control valve to determine which position the control valve lever must be in to turn auger in a forward (clockwise) rotation. This is the "digging" position.
2. Before beginning to dig, experiment with auger speed to determine a suitable auger RPM. Generally in light and sandy soil a high RPM is desirable. In hard, rocky, or frozen soils a slower RPM is desirable. To increase auger RPM, increase vehicle engine RPM. To decrease auger RPM, decrease vehicle engine RPM.
3. Raise the Auger Drive so the auger hangs vertical and the drive is clear of the cradle, then lower the auger into the starting position.
4. Ensure the crowd on your machine is forward and not back. This will keep the Drive clear of the cradle and allow the auger to move freely from side to side and forward and back. The pendulum action must not be hindered otherwise damage / bending of the shaft or auger may occur. Lower the auger into the ground ensuring the auger drive does not stall and remains in a vertical position, start rotation of the auger.
5. As the auger starts to load up with spoil, stop the rotation whilst still in the hole and raise the auger vertically. Move away from the hole, rotate the auger & stop, rotate the auger & stop in the forward direction to remove the spoil. DO NOT rapidly engage forward/ reverse action to remove spoil.

DO NOT RAPIDLY ENGAGE FORWARD REVERSE OPERATION TO REMOVE SOIL FROM THE AUGER, THIS CREATES EXCESSIVE PRESSURE SPIKES WHICH WILL ADVERSELY EFFECT PERFORMANCE AND LONGEVITY OF THE MOTOR

6. Do not remove the auger on an angle out of the hole, as you will run the increased risk of bending the auger or shaft.
7. If trying to remove the auger full of material and you experience strong resistance, reverse the auger slowly whilst raising the auger vertically to assist with removal. Do not pull with the machine as you may run the risk of shaft damage to the drive.
8. Do not flick the dirt (especially mud or clay) from the auger, as you may run the increased risk of bending the auger shaft.
9. Keep clearing the auger hole regularly as you drill deeper. This will help prolong the life of the auger and the wear parts.
   *Note In rock it is recommended to add a slow stream of water to help the performance and life of the rock teeth.

Excavators – Apply the greatest amount of down force from the main boom. Be aware that the boom moves in an arc and you will need to compensate for this movement by adjusting the dipper arm or moving your machine backwards or forwards to ensure you are drilling straight. You must take extreme care when doing this to prevent the auger or screw pile from bending or pulling flights against the inside of the hole.

All other machines – Ensure the vertical position is maintained when drilling, screw piling or core barrelling.

EXTENSIONS & TELESCOPIC AUGER EXTENSIONS - OPERATING PROCEDURE

1. Once you have obtained the maximum depth with the extension & auger you have, raise the auger out of the hole & clear the spoil from the auger. Place the auger back into the hole ensuring the auger is bottomed out in the hole & the hub of the extension is clear & easily accessible, remove the auger pin to disengage the auger drive from the auger. Install the additional extension onto the auger drive with pin & safety clip, lower the extension & attach to the auger with second pin & safety clip. Always ensure persons assisting are clear & visible to the operator at all times.
2. Recommence drilling. Once you have reached the maximum depth, raise the auger and extension out of the hole until the eyelets of the extension are visible & just above the hole. Slide the two support bars through the two heavy duty eyelets or U brackets welded to the outer extension. Either then remove the pin & section of extension and place away from the hole. Then re-pin back to the bottom section, take the weight of the rest of the extension & auger on the machine & remove the support bars. Clear the auger & then keep repeating these steps.
3. For telescopic extensions, use the same method as above, but slide the inner extension back into the auger & pin.

DIGGA DOES NOT ACCEPT ANY LIABILITY FOR INJURY OR DAMAGE RESULTING FROM THE OPERATOR USING THE EXTENSION(S) OUTSIDE THE DESIGNED OPERATING PROCEDURE

OPERATING PROCEDURES - SCREW ANCHORING (PILE/PIER)

1. Installation is to be performed by a trained and/or certified installer.

2. Connect the manufacture's approved adapters to the Planetary Drive head. As the pressure builds & the torque increases, install the pile in one continuous motion until the desired depth and torque is achieved.

3. Install pile/pier with a continuous motion. The rate should match the pitch on the pile. Make sure to apply just enough downward pressure to help the advancement of the pile into the ground, but not too much that you are driving or drilling the pile into the ground.

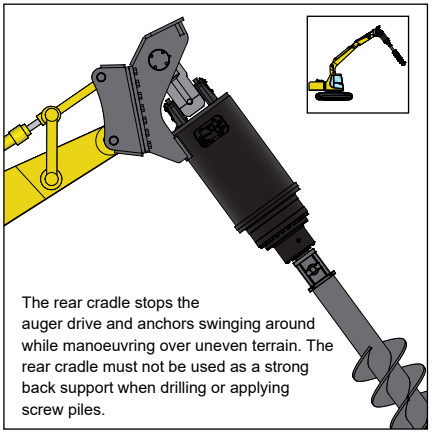
High Powered PD and SD Digga drives are only fitted with an ECV - Energy Contol Valve (Patented) as an "option" and designated as "SV" (see page 6). During the screw anchoring process energy builds up in the pile/pier and when the operator stops installation when torque is reached, the pile/pier temporarily 'flicks' back or rotates back forcing energy up the pile/pier back up through the gearsets and into the motor momentarily turning the motor into a pump. The ECV is designed to protect the motor from this action and essentially grabs the oil and gently bleeds it back down the hydraulic lines. The sound it makes is a gentle 'swoosh', this is how you know the valve is working.

N.B Ineffeciences occur with machinery that can reduce the torque output, such as heat, cold, age of machine etc... It is therefore highly recommended that Torque monitoring equipment to keep record of the torque and pressure is installed. Contact Digga or your local Digga Dealer for further information regarding torque monitoring options.

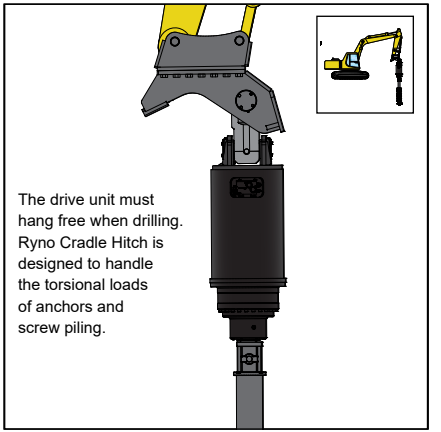
IT IS THE RESPONSIBILITY OF THE INSTALLER TO CORRECTLY CALCULATE, PLAN AND EXECUTE THE INSTALLATION OF THE PIERS TO THE NOMINATED TORQUES REQUIRED. DIGGA DOES NOT ACCEPT ANY LIABILITY OR CONSEQUENTIAL LOSS THAT IS INCURRED FROM INCORRECT INSTALLATION, OVER TORQUING OR UNDER TORQUING OF PILES.

OPTIONAL EXTRA - RYNO HITCH

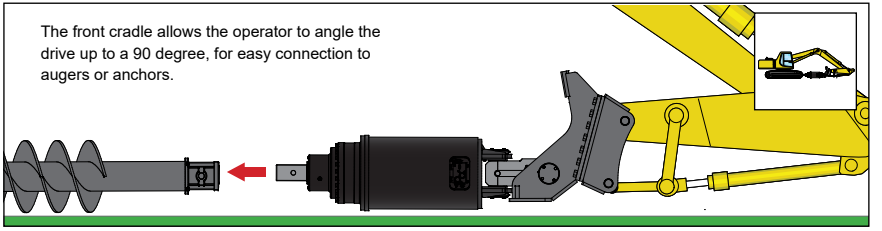
If you have purchased a Ryno Hitch please ensure you read and understand the following operational procedures



The rear cradle stops the auger drive and anchors swinging around while manoeuvring over uneven terrain. The rear cradle must not be used as a strong back support when drilling or applying screw piles.

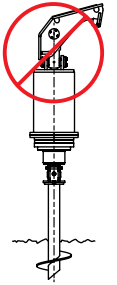


The drive unit must hang free when drilling. Ryno Cradle Hitch is designed to handle the torsional loads of anchors and screw piling.

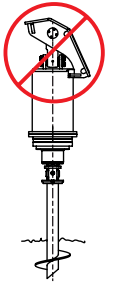


The front cradle allows the operator to angle the drive up to a 90 degree, for easy connection to augers or anchors.

AVOID PILE INSTALLATION WHEN HITCH IS FULLY UP

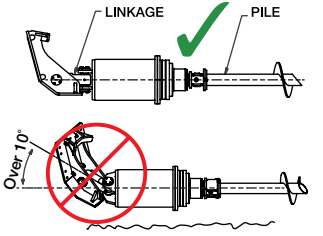


AVOID PILE INSTALLATION WHEN HITCH IS FULLY DOWN



PILE LOADING

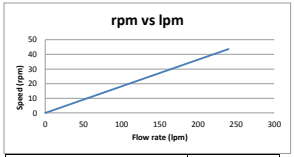
DURING PILE LOADING, MAKE SURE THAT THE LINKAGE IS IN LINE WITH THE PILE BEFORE STARTING THE CROWDING OR LIFTING ACTION. FAILURE TO DO SO MAY LEAD TO DAMAGE.

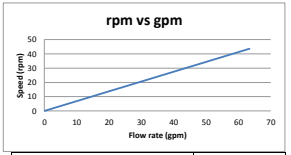


TF2.5 SINGLE SPEED TORQUE CHART

PD30-7-240-SS-090K-TF2.5- High Powered Torque Chart.

GF: 336





Max. Flow (lpm)	240
Max. RPM	44

Max. Flow (gpm)	63
Max. RPM	44

Output Torque	Differential Pressure Display
Nm	Bar
3,017	34
3,621	41
4,224	48
4,827	55
5,431	62
6,034	69
6,638	76
7,241	83
7,844	90
8,448	97
9,051	103
9,655	110
10,258	117
10,862	124
11,465	131
12,068	138
12,672	145
13,275	152
13,879	159
14,482	165
15,085	172
15,689	179
16,292	186
16,896	193
17,499	200
18,103	207
18,706	214
19,309	221
19,913	228
20,516	234
21,120	241
21,723	248
22,326	255
22,930	262
23,533	269
24,137	276
24,740	283
25,344	290
25,947	296
26,550	303
27,154	310
27,757	317
28,361	324
28,964	331
29,567	338
30,171	345

Differential Pressure Display	Output Torque
PSI	lbf-ft
500	2,225
600	2,670
700	3,115
800	3,560
900	4,006
1,000	4,451
1,100	4,896
1,200	5,341
1,300	5,786
1,400	6,231
1,500	6,676
1,600	7,121
1,700	7,566
1,800	8,011
1,900	8,456
2,000	8,901
2,100	9,346
2,200	9,791
2,300	10,236
2,400	10,681
2,500	11,126
2,600	11,571
2,700	12,017
2,800	12,462
2,900	12,907
3,000	13,352
3,100	13,797
3,200	14,242
3,300	14,687
3,400	15,132
3,500	15,577
3,600	16,022
3,700	16,467
3,800	16,912
3,900	17,357
4,000	17,802
4,100	18,247
4,200	18,692
4,300	19,137
4,400	19,582
4,500	20,028
4,600	20,473
4,700	20,918
4,800	21,363
4,900	21,808
5,000	22,253

GAUGING THE OPERATING CAPABILITY OF YOUR PLANETARY DRIVE UNIT.

There is a combination of parameters which have to be taken into consideration, like size of the machine, hydraulic operating pressure, hydraulic flow and knowing this information is essential to enable Digga to select the optimum drive unit for your specific requirements.

The following is an example of a torque chart to illustrate the torques achieved at corresponding pressure readings. A torque chart is supplied with every drive unit.

*IMPORTANT: This chart is based on theoretical values and is provided as a guide only.Digga accepts no responsibility complying with any installation requiring certain torques being reached. You will need to consult an engineer.

10 TECHNICAL SPECIFICATIONS

	TF 2.5 - 350 Single Speed
Maximum case pressure-Peak (Bar)	15
Maximum case pressure-Continuous (Bar)	5
Motor casing oil capacity (Litres)	4.0
Mass of motor-dry (Kgs)	86
Max. Displacement (cm^3/rev)	352
Min. Displacement (cm^3/rev)	-
* Continuous Speed (RPM)	700
* Maximum Speed (RPM)	900

* **NOTE!** THE ROTATIONAL SPEED IN THE TABLE IS MOTOR SPEED AND NOT DRIVE UNIT OUTPUT SHAFT SPEED

SAFETY - STICKER LOCATION

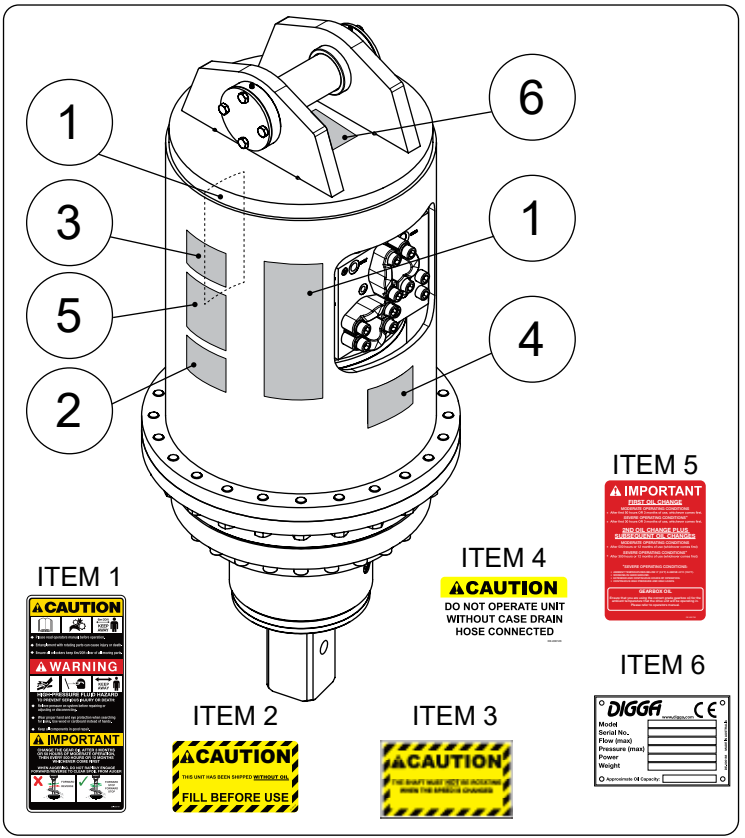
PLACEMENT OR REPLACEMENT
OF SAFETY SIGNS

1. Clean the area of application with non-flammable solvent, then wash the same area with soap and water.
2. Allow the surface to fully dry.
3. Remove the backing from the safety sign, exposing the adhesive surface.
4. Apply the safety sign to the position shown in the diagram above and smooth out any bubbles.

INSTRUCTIONS

- Keep all safety signs clean and legible.
- Replace all missing, illegible, or damaged safety signs.
- Replacement parts for parts with safety signs attached must also have safety signs attached.
- Safety signs are available from your dealer or from Digga.

ITEM NO	ORDER CODE	DESCRIPTION	QTY
1	DE-000791	DECAL - GENERAL WARNING	2
2	DE-000127	DECAL-WARNING - NO OIL	1
3	DE-000368	DECAL-WARNING - CHANGE SPEED	1
4	DE-000126	DECAL-WARNING - CASE DRAIN	1
5	DE-000790	DECAL-WARNING - OIL CHANGE	1
6	DE-000168	SERIAL TAG	1



IMPORTANT: OIL CHANGE SCHEDULE

There are 3 different gearset ratios and this has an effect on the volume of oil accommodated in the PD and SD gearboxes.

THE GEARBOX OIL CAPACITY IS ENGRAVED ONTO THE SERIAL TAG LOCATED ON THE TOP OF THE HOOD.

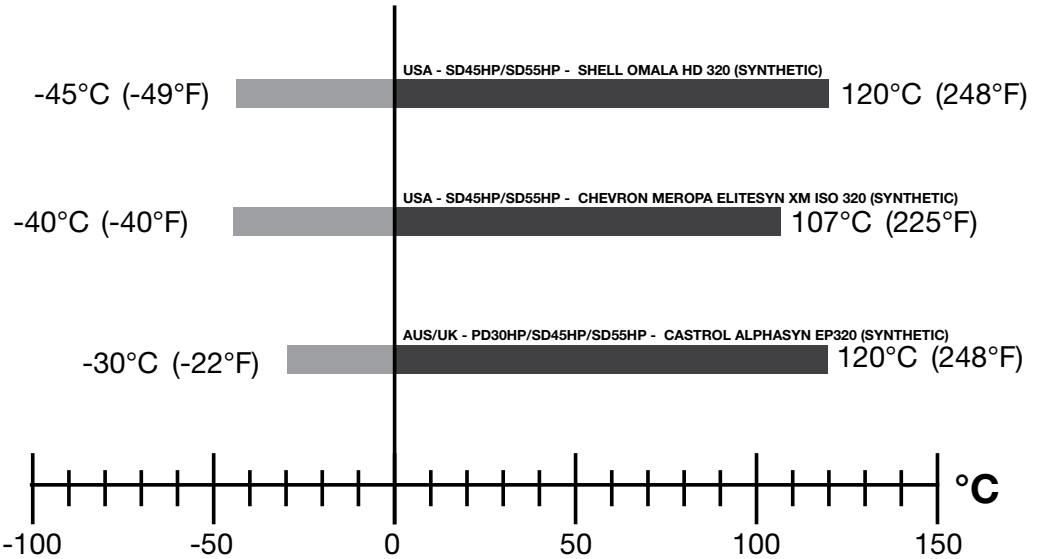
INITIAL (BED-IN) OIL CHANGE:

THE FIRST OIL CHANGE MUST BE CARRIED OUT WITHIN

- MODERATE OPERATING CONDITIONS - AFTER The first 50 hours of use. Thereafter, every 500 hours.
- SEVERE OPERATING CONDITIONS. (i.e. severe ambient temperature conditions of +40°C or below 0°C, when augering, screw piling or core barrelling in hard ground.) AFTER 30 HOURS OF USE Thereafter, every 300 hours.

	MODERATE OPERATING CONDITIONS	SEVERE OPERATING CONDITIONS*
FIRST OIL CHANGE	After first 50 hours OR 3mths of use, whichever comes first	After first 30 hours OR 3mths of use, whichever comes first
2ND OIL CHANGE PLUS SUBSEQUENT OIL CHANGES	After 500 hours or 12 months of use (Whichever comes first)	After 300 hours or 12 months of use (Whichever comes first) drive requires a major stripdown, inspection and rebuild
GEARBOX OIL:- CASTROL ALPHASYN EP320 SYNTHETIC GEAR OIL OR CHEVRON MEROPA ELITESYN XM SYNTHETIC GEAR OIL IS0320 OR SHELL OMALA HD SYNTHETIC - SEE PAGE OVER FOR MORE DETAILS		
***SEVERE OPERATING CONDITIONS:- AMBIENT TEMPERATURES BELOW 0° (32°F) & ABOVE 40°C (104°F). WORKING IN HARD GROUND. EXTENDED AND CONTINUOUS HOURS OF OPERATION. CONTINUOUS HIGH PRESSURE AND HIGH LOADS.**		

MINIMUM AND MAXIMUM GEAR OIL OPERATING TEMPERATURE FOR GEARBOXES



PROCEDURE TO CHECK THE GEARBOX OIL LEVEL

Unfortunately, there is no provision to make a quick visual inspection of the gearbox oil level. The gearbox is filled to the correct level at the factory. Unless there are clear signs of gearbox oil leakage it should not require topping up between scheduled services.

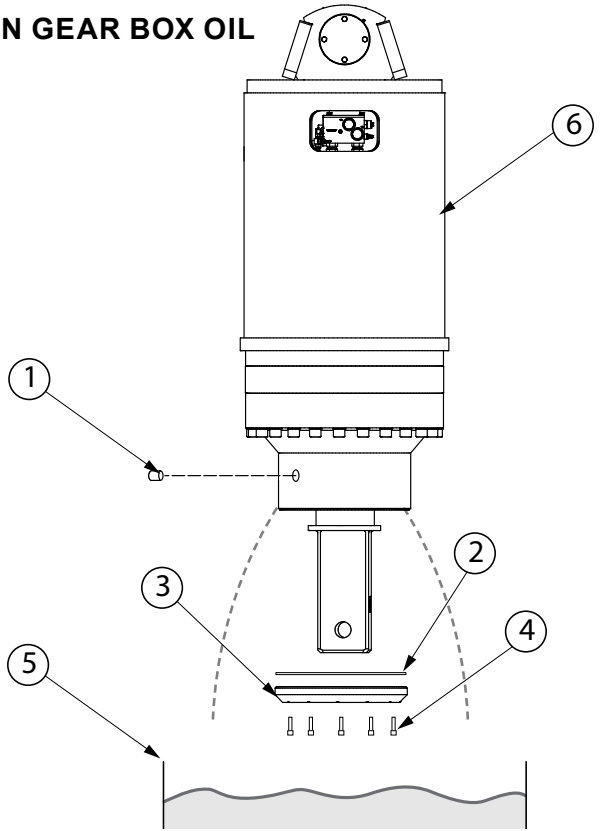
PROCEDURE TO DRAIN GEAR BOX OIL

The gearbox oil change interval should be carried out in accordance with the requirements set out in the table on page 32. It is advisable to replace the output shaft seal at the first oil change as this is the most important oil change to prolong the life of bearings, gears and seals. The reasoning behind this is that whilst bedding in, gearboxes can generate fine metallic contamination. This will find its way to the lowest part of the gearbox and collect in the output seal thus allowing an abrasive paste to wear the output seal. It is advisable that oil changes are performed by a Digga Authorised Service Agent, however it is not always possible for many reasons to get this done by a Dealer however what is important is that the oil is changed at the required intervals.

Remember to consider the environment, state and federal laws relating to disposal of oil. Dumping and spillage of oil onto land, storm water outlets and waterways is illegal. Oil must be disposed of by professional waste disposal or recycle specialists.

1. Ensure that the gearbox is stable, secure and safe to work on prior and that the drive unit is vertical and that there is an appropriate sized drip tray (Item no.5) to catch any oil spillage.
2. Before commencing to drain any oil, check the serial tag of the unit to determine the quantity of oil which the gearbox holds. This will indicate the size of the drip tray needed to contain the oil as well as the quantity of oil which has to be replaced in into the gearbox. Remove the drain plug (item 1) from the output housing. This will allow the bulk of the gearbox oil to drain out to an appropriate size drum or bucket. (this will not drain the gearbox entirely and therefore the output shaft seal must be removed to totally drain all the gearbox oil. Also this lower section of the output housing is usually where most foreign particles settle).
3. To drain the remaining oil which is below the drain plug level ensure that there is a drip tray to catch the oil spillage once the seal is removed.
4. Proceed to remove the socket head cap screws which attach the seal protector to the output housing and remove the seal protector.
5. The output shaft seal can then be pried out.
6. The oil will dump into the drip tray.
7. Usually the inside of the seal will collect a sludge build up. Proceed to clean the seal or replace if it appears damaged.

PROCEDURE TO DRAIN GEAR BOX OIL

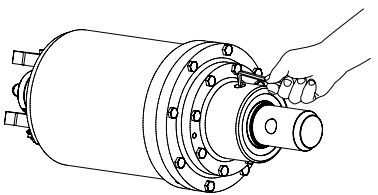


ITEM	DESCRIPTION
1	Pressure Plug (drain plug)
2	Output Shaft Seal
3	Seal Retainer
4	Socket Head Cap Screw
5	Drip Tray
6	Drive Unit

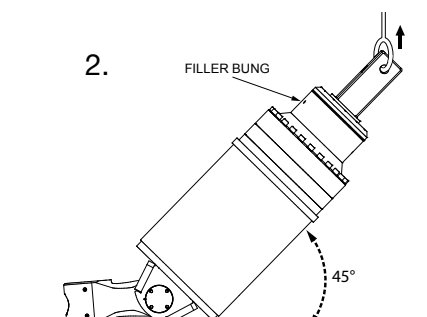
PROCEDURE FOR FILLING GEARBOX OIL LEVEL

- Ensure that you are using the correct grade gearbox oil for the ambient temperature that the drive unit will be operating in. (See page 33)
- Ensure that you have checked the serial tag to determine the quantity of oil that the gearbox holds. (See page 31 for serial tag location)
- Ensure that the gearbox is horizontal and the drain plug facing vertically up. (Image 1)
- Tilt the gearbox at approximately 45 degrees to the horizontal by lifting the output shaft end. (Image 2) This should allow the correct volume of oil to be decanted into the gearbox. If the gearbox oil starts to weep out the filler hole, before reaching the required quantity, then increase the tilt angle of the gearbox and continue to decant oil until the correct quantity is applied.

1. Lay the drive unit flat on the ground with the oil fill bung facing up.



2.



NOTE: IF YOUR UNIT IS LEAKING OIL AFTER YOU HAVE PERFORMED THE DAILY CHECKS CONSULT YOUR LOCAL AUTHORISED SERVICE AGENT.

OIL CAPACITY

PD AND SD DRIVE UNITS	OIL CAPACITY (LITRES)
PD30HP	6.6 litres
SD45HP	12.1 litres
SD55HP	12.1 litres

Digga manufacture High Powered planetary drive units in PD and SD series. For spare parts for your planetary drive unit, obtain the serial number off the aluminium serial tag located between the hood ears on the top of the hood of the drive unit (See illustration for location on page 31). The serial number allows Digga to trace all production and history from the computer database. Ensure all service and maintenance is performed by an authorised Digga service agent and all service records are kept.

DESCRIPTION	PART NUMBER
Case Drain Filter Head (Optional)	HA-000175
Case Drain Filter Element (Optional)	HA-000176

For further information on spare parts please contact one of the Digga sales office below your closest authorised Digga Dealer.

DIGGA INTERNATIONAL SALES OFFICES

ASIA PACIFIC

DIGGA HEAD OFFICE - BRISBANE
4 Octal St, Yatala QLD 4207

PH: (07) 3807 3330

EMAIL: info@digga.com

DIGGA NEW SOUTH WALES
19 Mckay Close,
Wetherill Park, NSW 2164

PH: 1300 2 DIGGA

EMAIL: nsw@digga.com

DIGGA VICTORIA
17-21 Babbage Dr,
Dandenong, VIC 3175

PH: 1300 2 DIGGA

EMAIL: vic@digga.com

WEB: www.digga.com

NORTH AMERICA

DIGGA NORTH AMERICA
2325 Industrial Parkway SW
Dyersville IA 52040

PH: + 1 563 875 7915

WEB: www.diggausa.com

EMAIL: info@diggausa.com

EUROPE

DIGGA EUROPE
Unit 6, Smitham Bridge Road
Hungerford Trading Estate,
Hungerford, Berkshire RG17 0QU
England, United Kingdom

PH: +44 (0) 1488 688 550

WEB: www.diggaeurope.com

EMAIL: info@diggaeurope.com

As the auger is engaging the ground, wear must occur to dig holes. Therefore, the auger teeth and pilot must be checked regularly and replaced with new wear parts. Failure to do so will damage the auger pockets and flighting.
THIS WILL CAUSE COSTLY REPAIR TO YOUR AUGER.

SUITABLE AUGERS

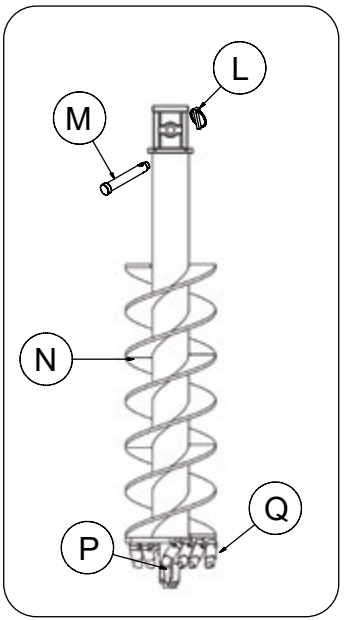
AUGER	OAL	FLIGHT THICKNESS	STD SIZES AVAILABLE	TEETH	SUITABLE DRIVES
A11/RC11*	1550mm	12/16mm	150mm (6”), 1500mm (60”)	TTL	SD

*A11 AND RC11 AUGERS ARE THE SAME. NAME DIFFERS IN DIFFERENT COUNTRIES

REF	DESCRIPTION	QTY
L	Clip (Lynch Pin)	1
M	AUGER PIN	1
N	AUGER	1
P	WEAR PART - PILOT	1
Q	WEAR PART	*

IMPORTANT:

CHECK THE WEAR PARTS ON YOUR AUGER ON A REGULAR BASIS. ENSURE ALL REPLACEMENT PARTS ARE GENUINE DIGGA WEAR PARTS



WEARPARTS FOR A11 / RC11 AUGER

TEETH	PILOT
 TTL Multifacet Tungsten teeth are suitable for all ground soil conditions, heavy clay, asphalt, concrete, frozen ground, and fracturable rock.	 PH-3XL STD Pilot

SINGLE SPEED DRIVE UNIT

TROUBLE	POSSIBLE CAUSE	REMEDY
No Rotation	Quick release coupler(s) not engaged	Check quick release coupler(s)
	Quick release coupler(s) faulty	Replace faulty coupler(s)
	Auxiliary valve on machine faulty	Refer to machine manual
	Hydraulic oil tank low	FIll oil tank to maximum level
	Hydraulic motor failure	Contact your DIGGA Dealer*
	Output shaft bearing failure	Contact your DIGGA Dealer*
	Planetary gear failure	Contact your DIGGA Dealer*
	Machine oil pump faulty	Refer to machine manual
Slow Rotation	Low oil flow	Check machine specifications
	Drive unit to large for machine	Contact your DIGGA Dealer*
	Hydraulic system too hot	See hydraulic section
Hood Leaking Oil	Hose(s) or Fitting(s) Leaking	Tighten or replace
	Motor 'O' ring failure	Contact your DIGGA Dealer*
Output Shaft Leaking Oil	Oil seal failure	Contact your DIGGA Dealer*
	Hydraulic motor failure	Contact your DIGGA Dealer*
No Torque	Oil pressure too low	Check machines specifications
	Drive unit too small for machine	Contact your DIGGA Dealer*
	Hydraulic system too hot	See hydraulic section
Grinding or Loud Noise	Gearbox failure	Contact your DIGGA Dealer*

HYDRAULIC SYSTEM

TROUBLE	POSSIBLE CAUSE	REMEDY
Oil Over Heating	Restriction in Line	Inspect and Repair
	Auger Continually Stalling	Limit Down Pressure
	Drive Unit too Small	Contact your DIGGA Dealer
	Machine too Small	Fit Drive Unit to Larger Machine
	Hydraulic Oil Tank Low	Fill Oil Tank to Maximum Level
	Insufficient Oil Capacity	Fit Oil Cooler

AUGERS

TROUBLE	POSSIBLE CAUSE	REMEDY
Slow Digging Speed	Worn Teeth or Pilot	Replace (See Wear parts, inside back cover)
	Ground too Hard	Contact your DIGGA Dealer
	Low Oil Flow	Check Machine Specifications
	Auger too Large for Drive Unit	Fit Larger Drive Unit
	Machine too Small	Fit Drive Unit to Larger Machine

* DO NOT DISASSEMBLE DRIVE TO ASSESS FAULT, DISASSEMBLY WITHOUT WRITTEN PERMISSION AND INSTRUCTIONS FROM DIGGA WILL VOID ALL WARRANTY.

WARRANTY

Motor - Limited warranty up to 12 months subject to manufacturers inspection
Gearbox - Limited warranty up to 12 months subject to manufacturers inspection

All new Digga products are warranted to be free from defects in materials or workmanship, for a period of twelve (12) months from date of original purchase, which may cause failure under normal usage and service when used for the purpose intended.

In the event of failure within twelve (12) months from initial retail sale, lease or rental date (excluding cable, ground engaging parts such as sprockets, digging chain, bearings, teeth, tamping and demolition heads, blade cutting edges, pilot bits, auger teeth, auger heads), if after examination, Digga determines failure was due to defective material and/ or workmanship, parts only will be repaired or replaced. Digga may request defective part or parts be returned prepaid to them for inspection at their place of business or to a location specified by Digga. The warranty will be considered void if the product or any part of the product is modified or repaired in any way not expressly authorized by Digga, or if closed components are disassembled prior to return. Closed components include, but are not limited to: gearboxes, hydraulic pumps, motors, cylinders and actuators. Any goods returned to Digga by the customer under warranty or repair must have all freight charges prepaid for on the customers account.

Any claims under this warranty must be made within fifteen (15) days after the Buyer learns of the facts upon which such claim is based. All claims not made in writing and received by Digga outside the time period specified above shall be deemed waived.

DAMAGEORFAILURETHROUGHOPERATORABUSEORNEGLIGENCEVOIDSWARRANTY

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Australian Designed and Manufactured