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A05 TO A06

INSTALLATION MANUAL

Please consult Harsh if any issues arise as operating instructions are subject to change without prior notice.



FM 13737

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www.harshuk.com

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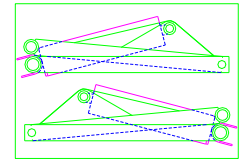
HARSH A5 - A6 FRAME MOUNTING AND ASSEMBLY GUIDELINES

Your Harsh tipping gear kit will be supplied to you in box form with all the parts together. A packing list containing all the kit parts will be attached to the top of the box. It should be checked against the boxes contents before fitting takes place. If a pre-built A5/6 Frame has not been requested the Tipping Gear will be supplied with the rest of the kit. Instructions on how to build the Frame are set out below.



FRAME MOUNTING:

The HARSH tipping gear can be mounted with the stabiliser frame facing either forward or rearward for mounting versatility. Chassis equipment or cross members may restrict this. Ensure the movement of the ram fitting (s) is taken into account before mounting the tipping gear within the chassis sub frame.



If your A5/6 Frame hasn't been pre – built, all the main parts required for yourselves to build it are supplied in the kit except for the Steel Box Section. The size of Box Section you will require is 80mm X 40mm. Cut the Box Section to the required lengths and cut the Holes and Angles for the Hinge assembly before welding together. Ensure steel conforms to chassis manufacturers recommendations.



Once you have cut the steel required, set out the upper part of the frame and make sure it is square and even before welding it together. Be sure to only tack the front cross member into place on both the upper and lower frame. This is in case it needs to be moved to suit the chassis.



Next, set out the lower frame and weld it together. You will need to grind the welds on the top face of the frame flat so that the wood packers will sit evenly on top of it. Sit the upper frame on top of the lower frame and clamp them together making sure they are square and correctly positioned. (See drawing for the position required)



Cut both ends of the cross members that hold the gear in place to fit inside both frames. The length of the cross members will be the same as the upper and lower frame cross members. Ensure an equal amount is taken off each side to keep the tipping gear central within the sub frame.



Mount the A5/6 scissor and ram assembly into the cross members.



Place the cross members in their correct positions but only tack them in place once they are square and even within the frame and the tipper frame is attached to them. (The scissor frame is held in place by 2 small hinge pins with a split pin and a washer through each end. Ensure split pins are opened). Ensure the tipping gear is equally spaced in the frame.



Place a flat bar under the front end of the tipping gear to keep the tipping gear level.



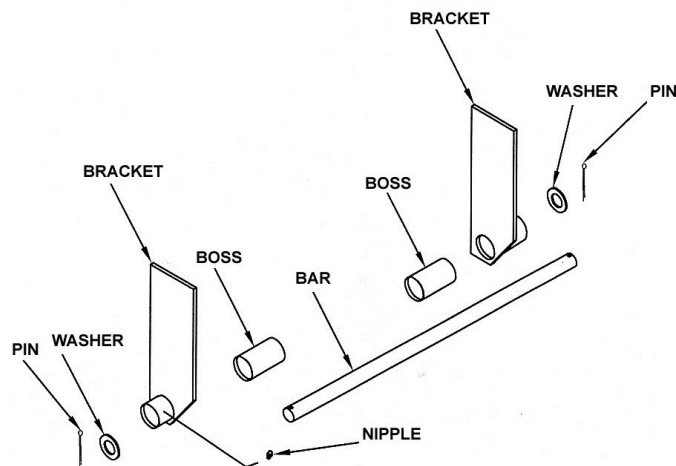
Next you will need to build up the hinge assembly on the rear of the frame. Place the hinge bosses through the holes you drilled earlier. Place the hinge bar through the bosses making sure the hinge brackets are on the inside of the frame. Tack weld the parts on to the frame making sure the holes for the grease nipples are easily accessible. When you know the assembly is square you can properly weld all the parts together.



NB. YOU MAY NEED TO CUT THE HINGE BAR DOWN IN LENGTH AND IT IS HELD IN PLACE IN THE SAME WAY AS THE PINS ON THE TIPPER FRAME.



The hinge assembly fits together as shown in the diagram.



You also need to weld in the tipper frame cross members. A minimum of one cross member at the front and rear of each frame. In the lower frame the rear cross member should be placed just forward of the tipper hinge.



A diagram of the frame can be supplied with the rest of the Kit if requested, but the building of the frame is generally straightforward. If you paint the Frame when it is complete be sure to cover the chrome part of the Ram as paint will damage its seals and invalidate the warranty.



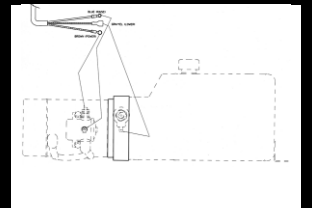
Once in the correct position the Frame should be bolted down. This is done by placing steel plates along the chassis. The plates should be spaced out and fitted in suitable locations along both sides of the chassis. The plates should be fitted so that the frame sits centrally on the plate. The plate on the chassis should be bolted down with two 14mm bolts (9/16), and the frame should be welded into position. This is subject to chassis type and manufacturers recommendations. The type shown is to elevate the frame. This type may be required to achieve extra clearance on chassis equipment or to gain correct bump clearance on the body.



When the Frame is bolted into place you need to wire in your Cab Control switch. The positioning will vary with each chassis but must not be in a location where injury or accidental operation could take place.

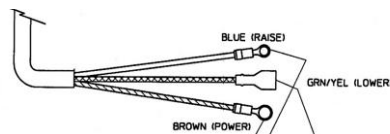


The Switch consists of 3 wire connections. The wires run along with the chassis's own wire loom from where the Power Pack is positioned. The Power Pack should be positioned in a suitable location, preferably as near to the Cab as possible. The battery earth cable is not supplied in the kit. Once checked to be operationally correct, fit the motor cover.



If using the push button switch supplied the wires should be as follows:

Blue – Raise
Green/Yellow – Lower
Brown – Power



The Hoses supplied in your A5/6 kit should now be fitted. The A5/6 ram will have 2 ports specially for the Hose to the Power Pack and the other port near the cylinder rod should be piped so the second pipe runs down the cylinder and is attached to the pressure hose and piped back to the power pack tank return port.



Once your A5/6 Gear and Frame is completely fitted check to make sure that every thing is correctly tightened, connected up properly and that there are no leaks from any of the Hydraulic Hoses.

When Bleeding the system, tip the Ram and Frame 2 – 3 times. This will cause the air to be pushed out of the system.

Re-fill the oil reservoir as required.



FINAL CHECKS:

ONCE THE BODY IS MOUNTED IT IS ESSENTIAL TO RE-CHECK THE FOLLOWING POINTS.

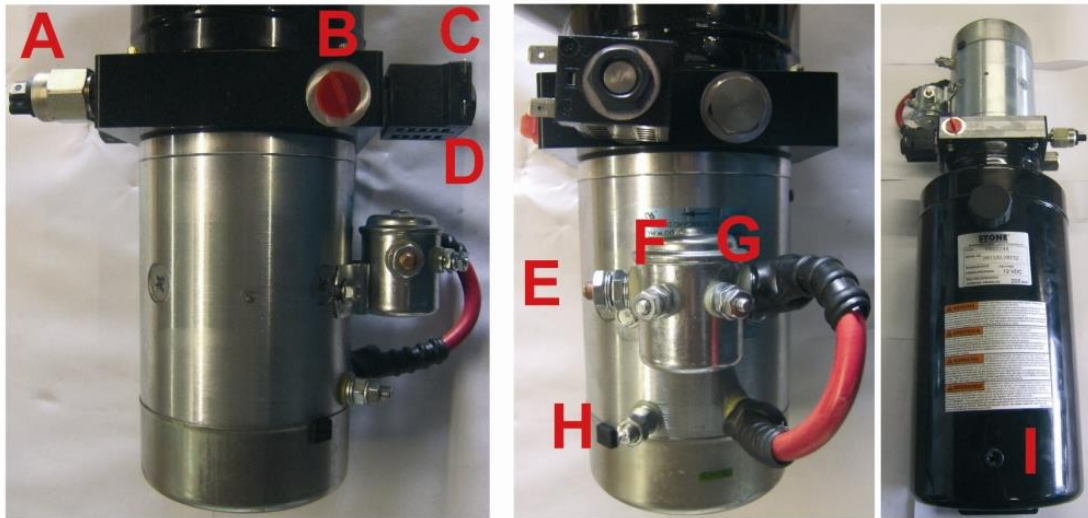
- 1) ENSURE THE BODY SITS ON THE CHASSIS AND IS NOT OFF THE CHASSIS AT ANY POINT.**
- 2) ENSURE THE HARD WOOD LONGITUDINAL PACKINGS ARE SECURE AND SIT CORRECTLY ON THE LOWER FRAME.**
- 3) CHECK TOP OF RAM CLEARS BODY FLOOR WITH CLEARANCE FOR BODY WEAR AND CHECK PIPES / RAM CLEARS ALL CHASSIS CROSSMEMBERS.**
- 4) ENSURE AFTER FINAL INSTALLATION FRONT TACKED CROSSMEMBERS ARE FULLY WELDED IN POSITION.**
- 5) ENSURE BODY WARNING DEVICE WORKS CORRECTLY.**
- 6) RE-CHECK ALL BOLTS AND FITTINGS PAYING CLOSE ATTENTION TO THE CHASSIS / SUBFRAME MOUNTINGS.**
- 7) AGAIN BLEED THE SYSTEM AND RE-FILL WITH OIL AS REQUIRED.**
- 8) ENSURE ALL OPERATION STICKERS ARE FITTED IN THE CAB AND ALL WARNING SIGNS ARE CLEARLY VISIBLE.**
- 9) ENSURE FITTING AND MAINTAINANCE MANUAL IS PLACED ALONG WITH WARRANTY AND CE DOCUMENTATION IN THE CAB FOR THE OPERATOR.**

HARSH LTD has a policy of continuous improvement and therefore reserves the right at any time without notice to change the supply origin, price and specification of any products supplied by it. Any prices, descriptions or other data relating to any products supplied by HARSH LTD are given in good faith but HARSH LTD shall have no liability of any nature should there be any discrepancy between any products supplied and prices, descriptions or data.

If further general technical information is required consult the tipping gear and mounting guidelines booklet available at www.harshuk.com or alternatively call our technical department on 01759 372100.



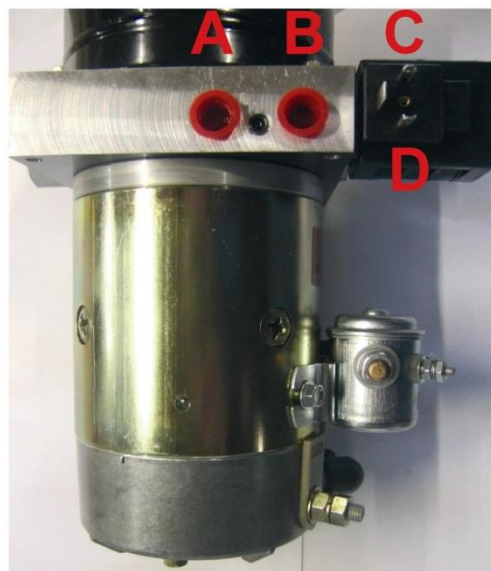
POWERPACK INSTALLATION



Key -

- | | | |
|---|---|--------------------------------|
| A- Pressure Switch if Installed | B- PORT A to Ram | C- To Earth |
| D- Green / Yellow from Remote | E- Battery Positive (+) and Brown Wire from Remote | |
| F- Blue Wire from remote | G- To Earth | H- Battery Negative (-) |
| I- Removable Plug if required to allow Return Hose | | |

HARSH SINGLE ACTING POWERPACK

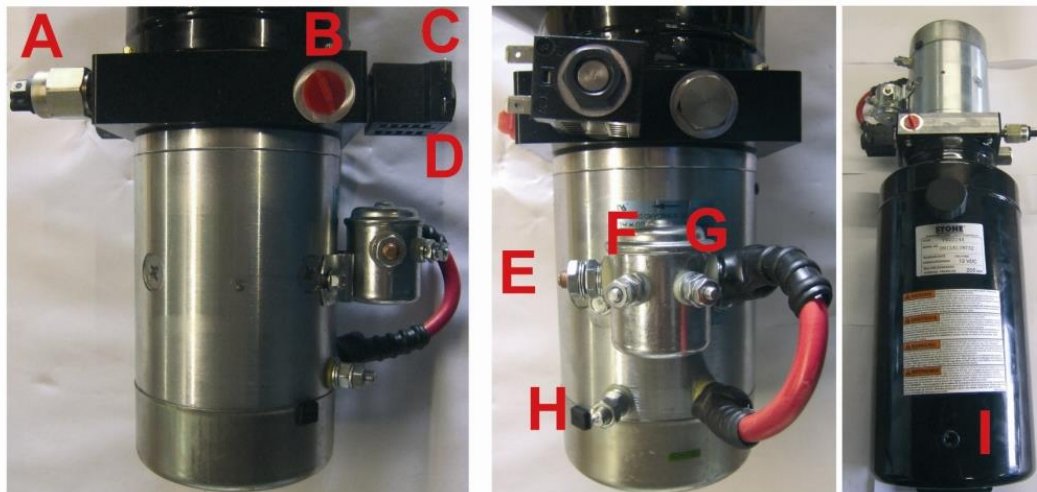
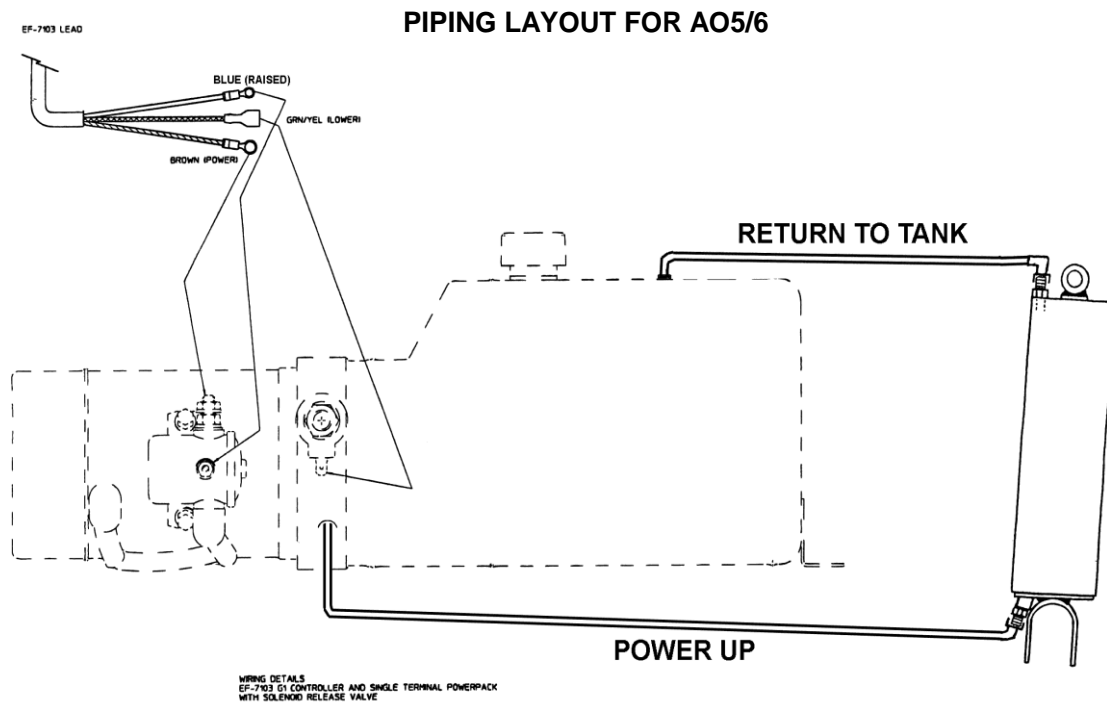


Key -

- | | | |
|--------------------------------------|---|--------------------------------|
| A- PORT A to upside of Ram | B- PORT B to lower side of Ram | C- To Earth |
| D- Green / Yellow from Remote | E- Battery Positive (+) and Brown Wire from Remote | |
| F- Blue Wire from remote | G- To Earth | H- Battery Negative (-) |

HARSH DOUBLE ACTING POWERPACK

Single Acting Layout

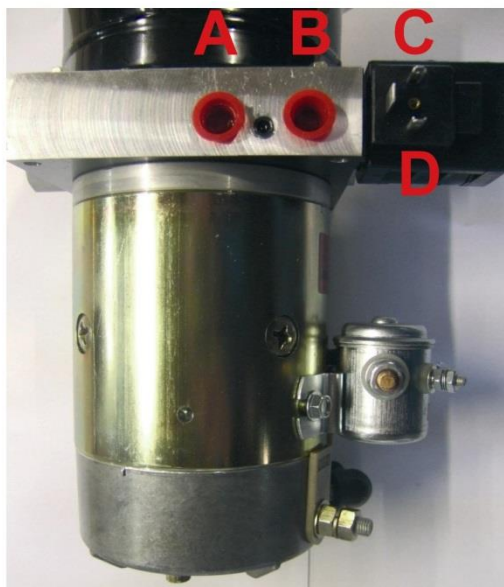
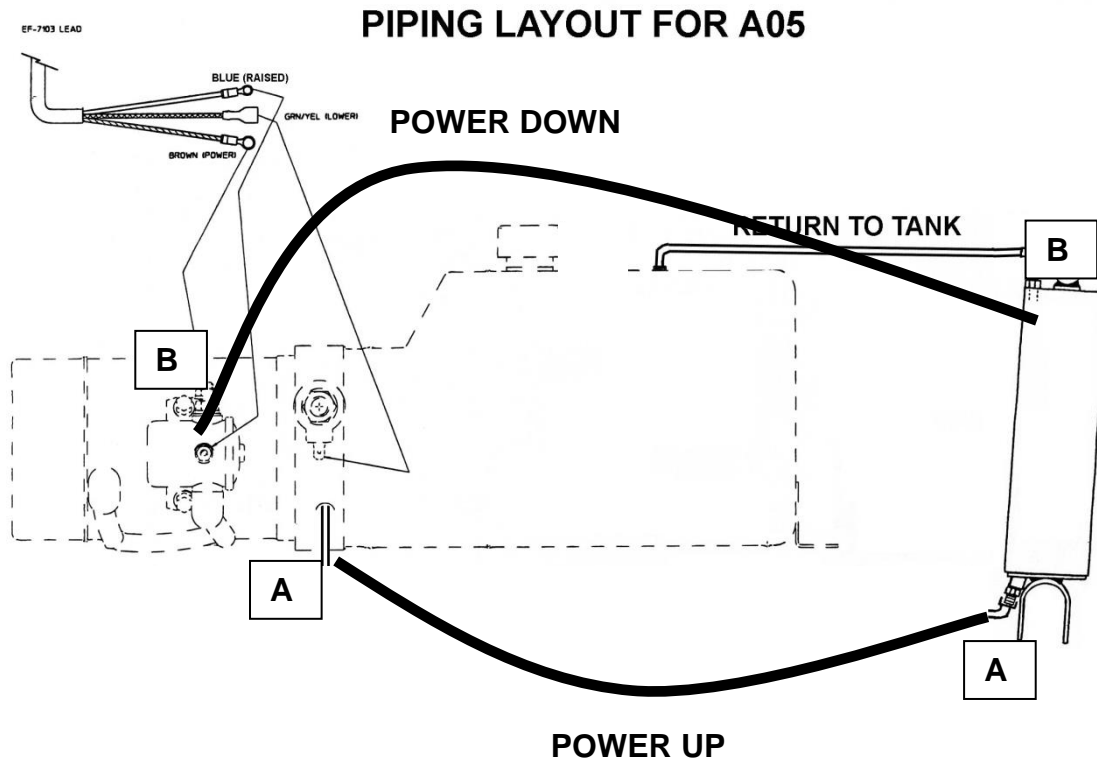


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HARSH SINGLE ACTING POWERPACK

Double Acting Layout

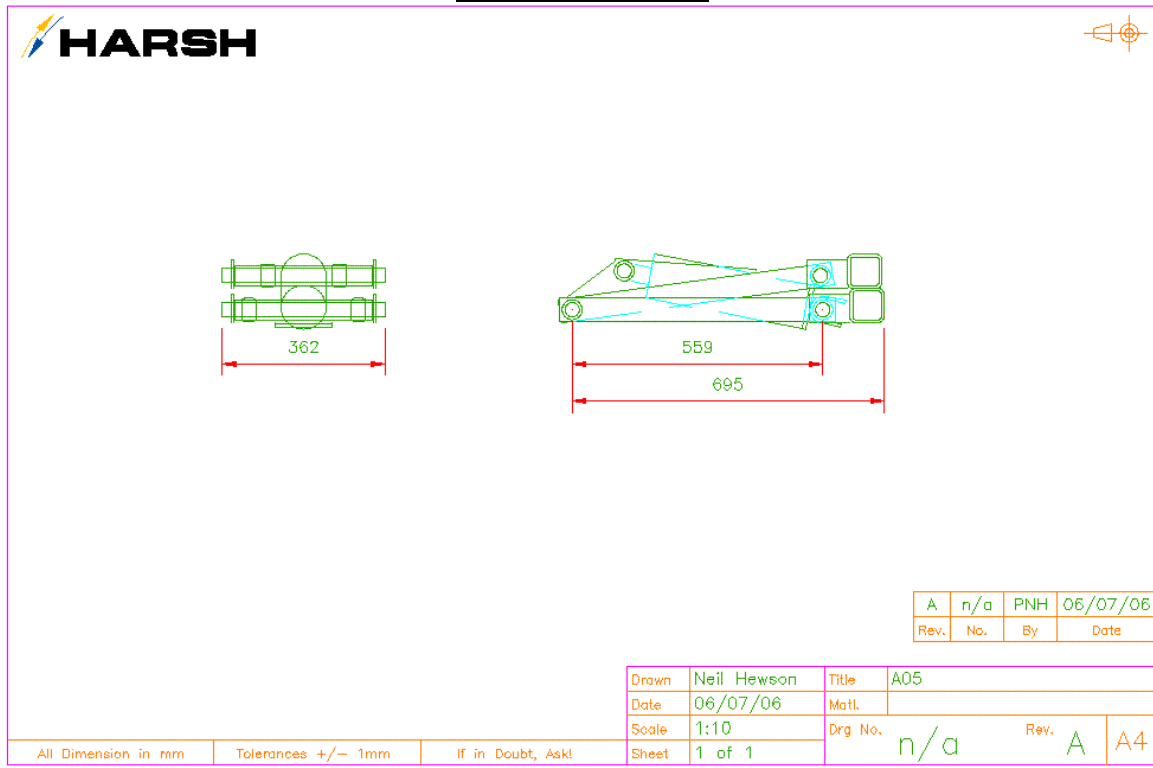


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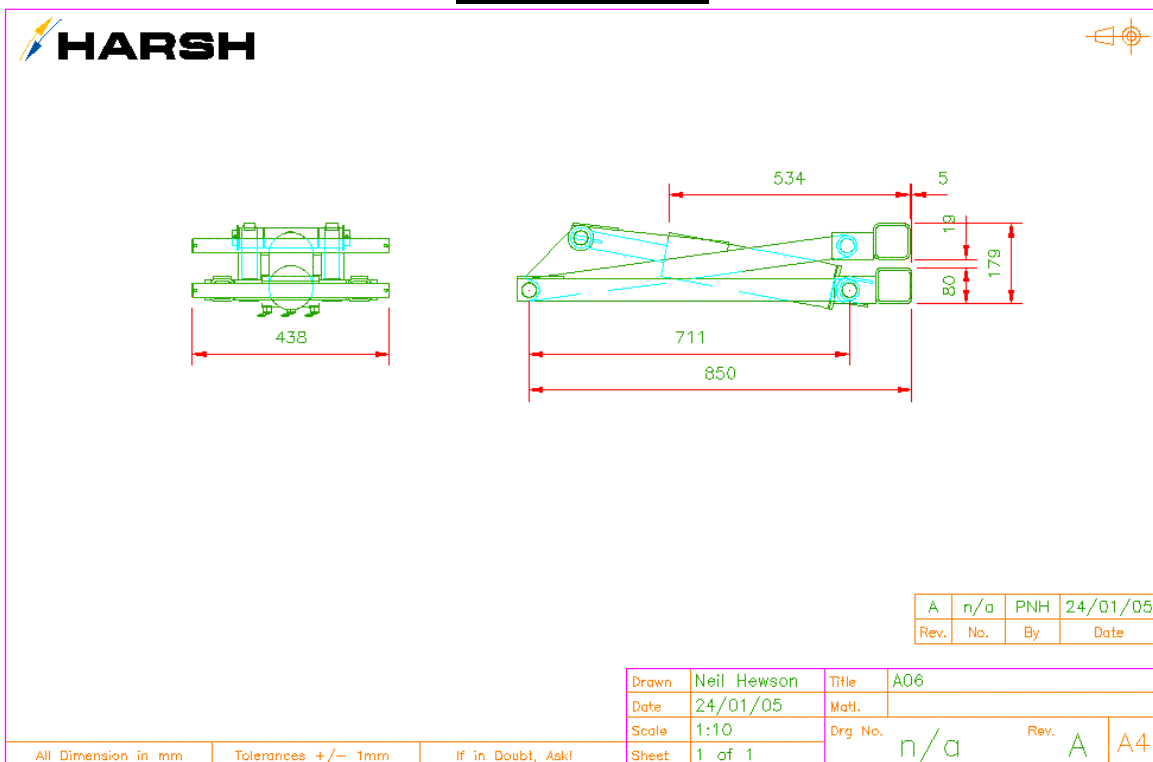
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HARSH DOUBLE ACTING POWERPACK

A5 DIMENSIONS



A6 DIMENSIONS



MAINTENANCE INSTRUCTION

Periodic maintenance and inspection will increase the working life of the Tipping hoist. Follow the routine of the checklist set out below at least **once per week** or every **50 cycles** whichever is sooner to ensure efficiency and safety of the tipping gear.

Liberal grease all grease points on the tipping gear and rear hinge.

Check all high pressure pipes and connections for oil leaks.

Check oil level in tank when Tipping hoist is at rest. Top up if necessary using the following: -

Recommend hydraulic oil: - Elf - Hydrelf 68. Morris - Triad HV37a. Texaco - Rando HD268.

Shell - Tellus 68.

Check fixing bolts for damage and tightness.

Check vehicle for any form of damage or wear and take measures to fully repair or replace damage on the vehicle.

Replace any damaged tipping gear parts immediately with genuine HARSH replacements.

SAFETY INSTRUCTION

While Tipping

Always check for overhead wires, obstructions and make sure that no other people are in the vicinity of the vehicle or tipping area before tipping.

Tip with the vehicle at rest, on level ground and with a balanced even load.

(Never overload, or heap the load).

Always check the conditions of the area where tipping i.e. do not tip when there is:

Wet or unstable ground which may collapse or in high winds.

Stay in cab when tipping. If the load sticks or any problems develop immediately lower the body. (Never shunt load free or leave cab and go under a raised loaded body.)

After tipping, always lower the body fully before driving off and disengage PTO.

While Working on Vehicle

Never work under a raised loaded body even if propped.

Never work under a raised empty body unless propped.

Look for any signs of wear not only on the tipping gear but also the wood packers, hinge assembly, hoses, valve and tank assembly.

NEVER ALLOW ANYONE UNDER AN UNPROPPED BODY



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