


HR15/17N HYB MK3 motor cradle update	
Instruction No.: HR15/17_CI04	Product: HR15/17N HYB MK3
Operation: Update the HR15/17N HYB MK3 motor cradle by fitting P32400	
Health & Safety Considerations:	 Standard Practices Only
Tools Required: 6mm & 8mm Allen key, 10mm & 17mm spanner, 17mm & 19mm socket, ½” drive ratchet, 250mm & 450mm ½” drive extensions, 14mm insulated spanner. M8 eyebolt (250KG SWL min) crane or lifting equipment with minimum SWL 250KG.	
Consumables Required: 2x M10x80x1.25(fine) 12.9 Cap Head bolt	
Parts Required: P32400	
Notes/Other References: None	

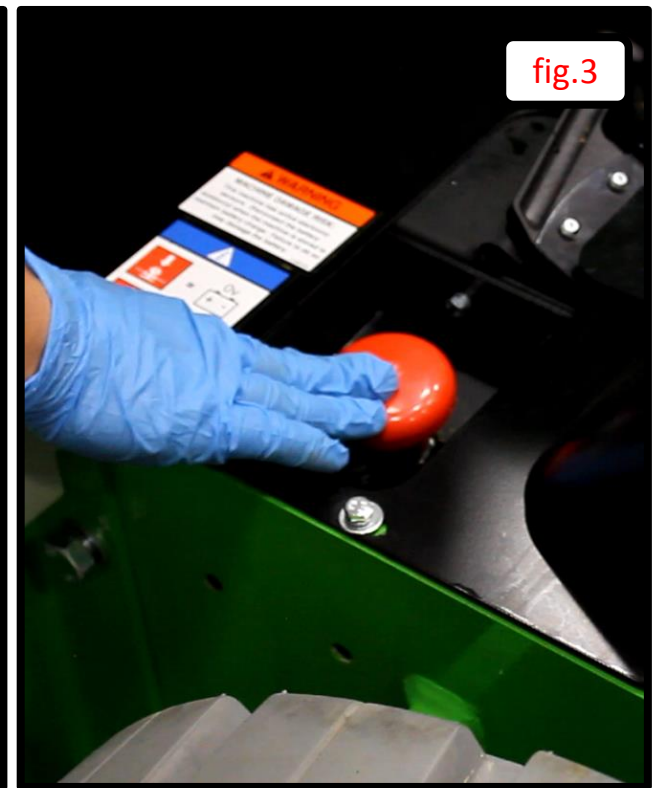
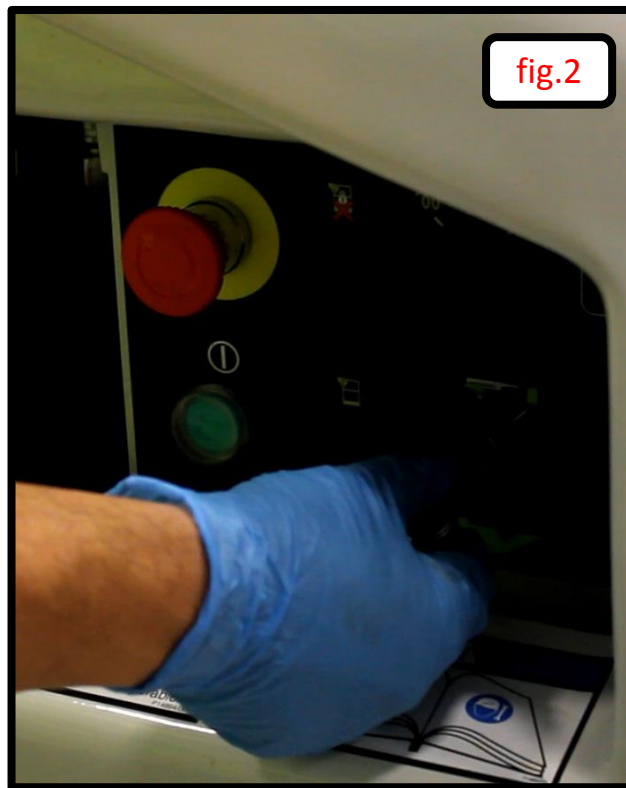
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All update activities should be carried out by a competent MEWP service technician adhering to standard health and safety practices.

Whilst every effort has been made to include all information and details required to facilitate the above mentioned updates should you have any queries contact the Niftylift Service department via service@niftylift.com.

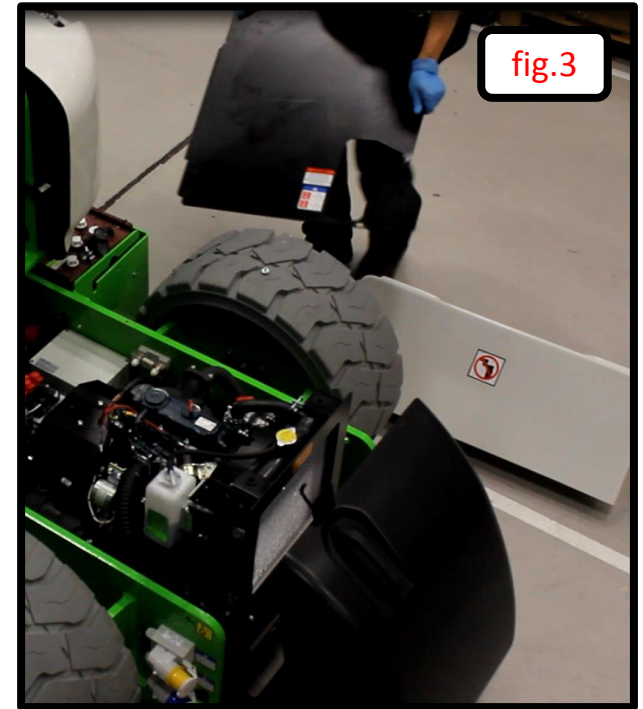
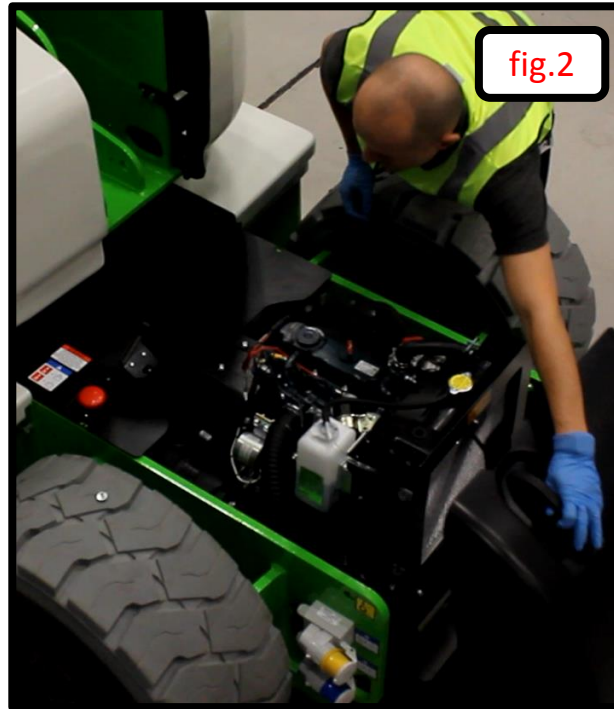
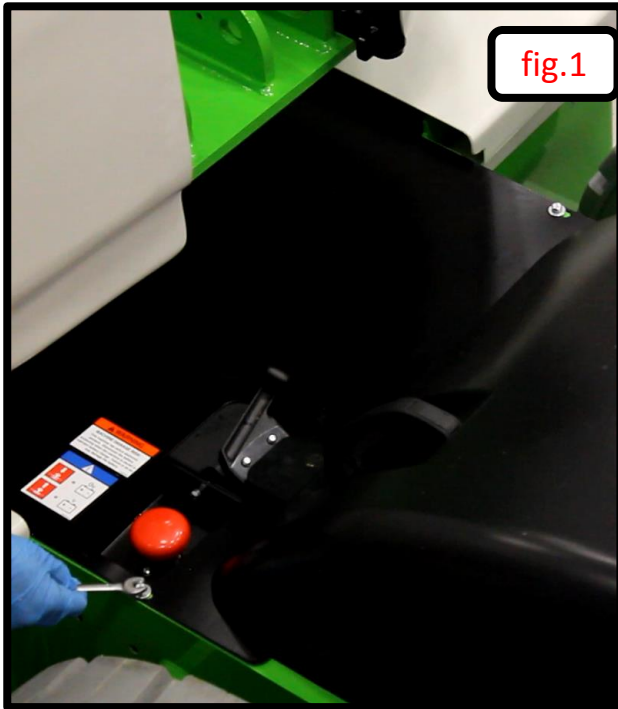
1. Position and isolate the machine

For ease of access operate the links function to full height (fig.1) before turning the machine key switch to off (fig.2) and pressing the red isolator located in the centre cover (fig.3).



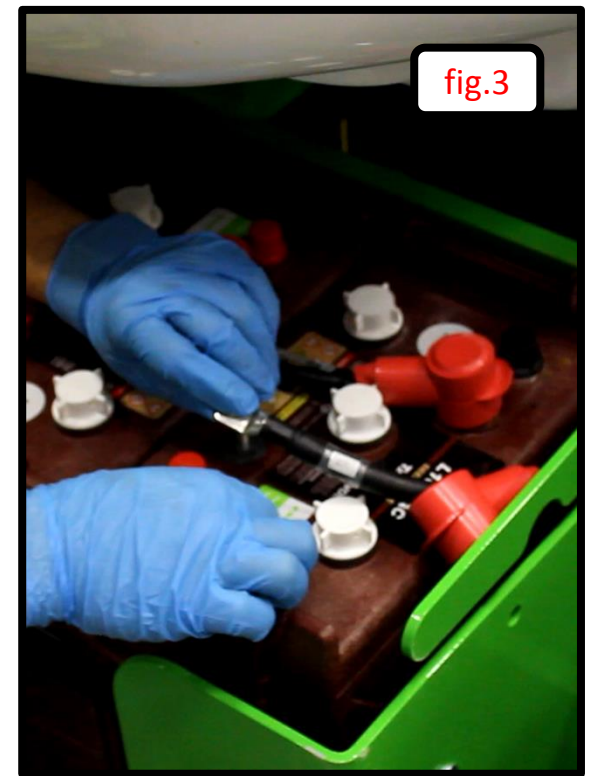
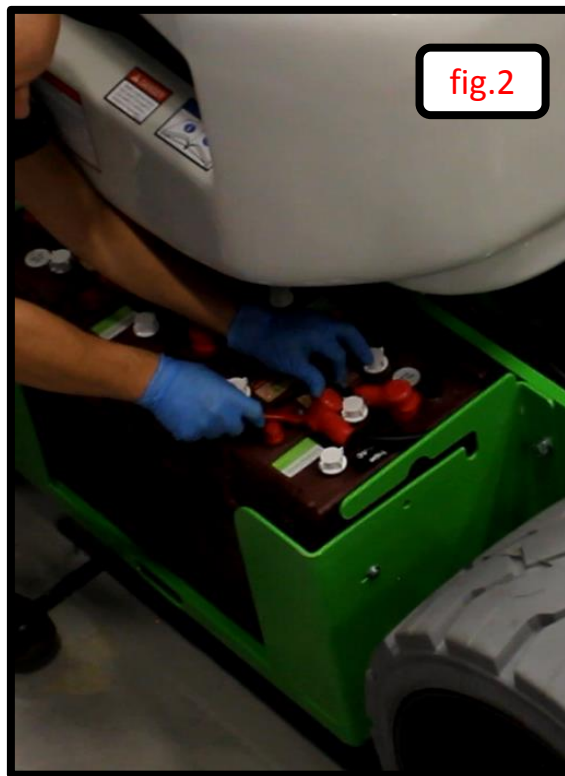
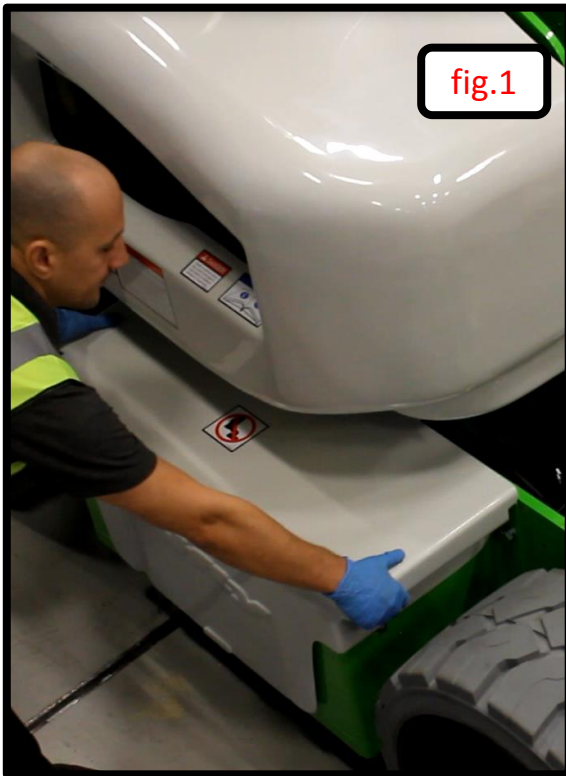
2. Open bonnet and remove covers

Using the 10mm spanner undo the 2 centre cover fasteners (fig.1), open the bonnet using the latch (fig.2), remove the right hand battery cover and slide the centre bonnet out slightly before lifting clear (fig.3).



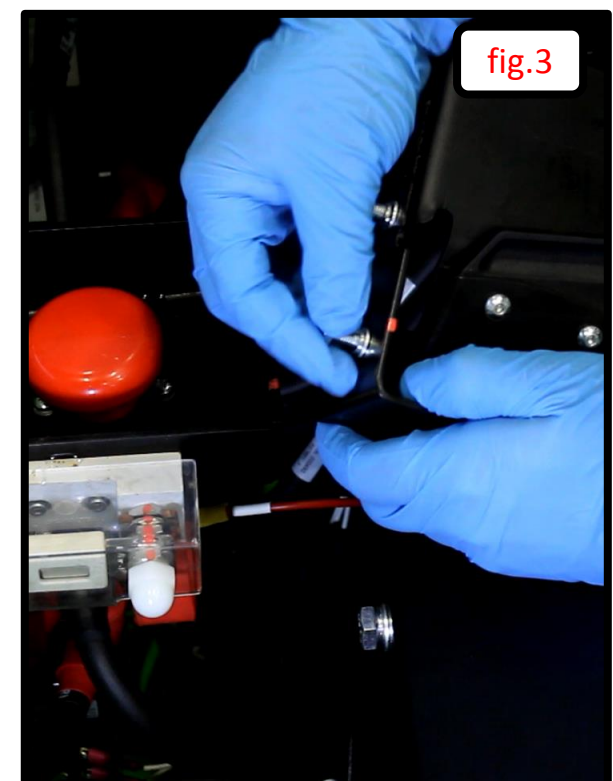
3. Disconnect the Hybrid batteries

Open the control side battery canopy (fig.1), locate the first battery in the bank (fig.2) and remove the positive terminal (fig.3).



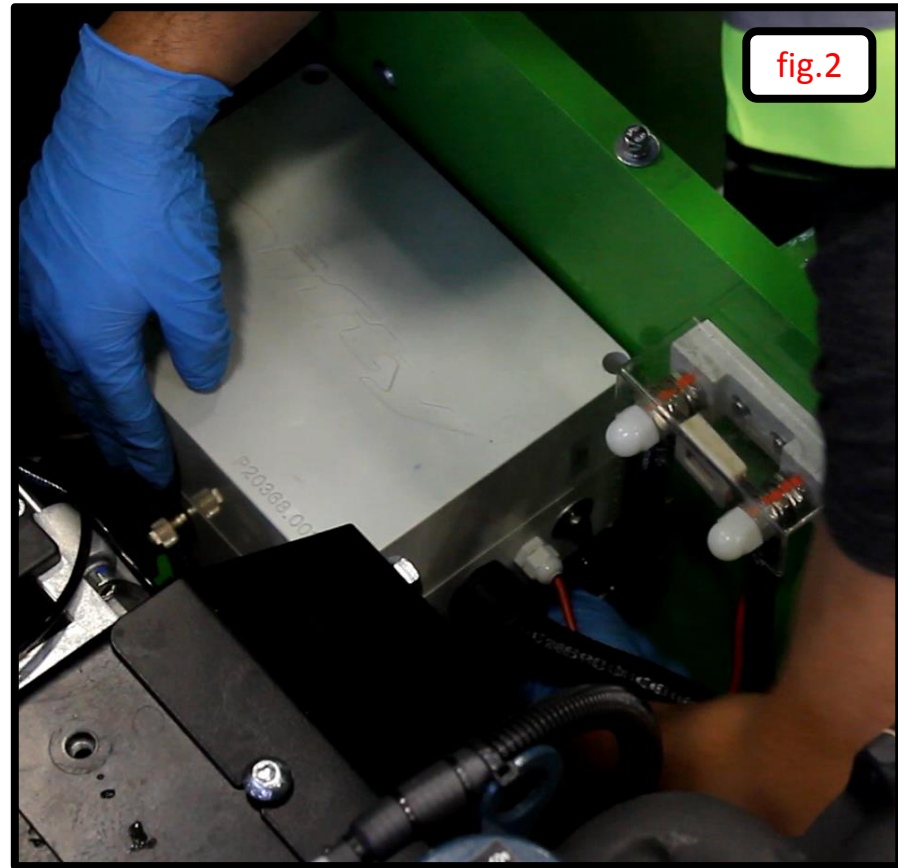
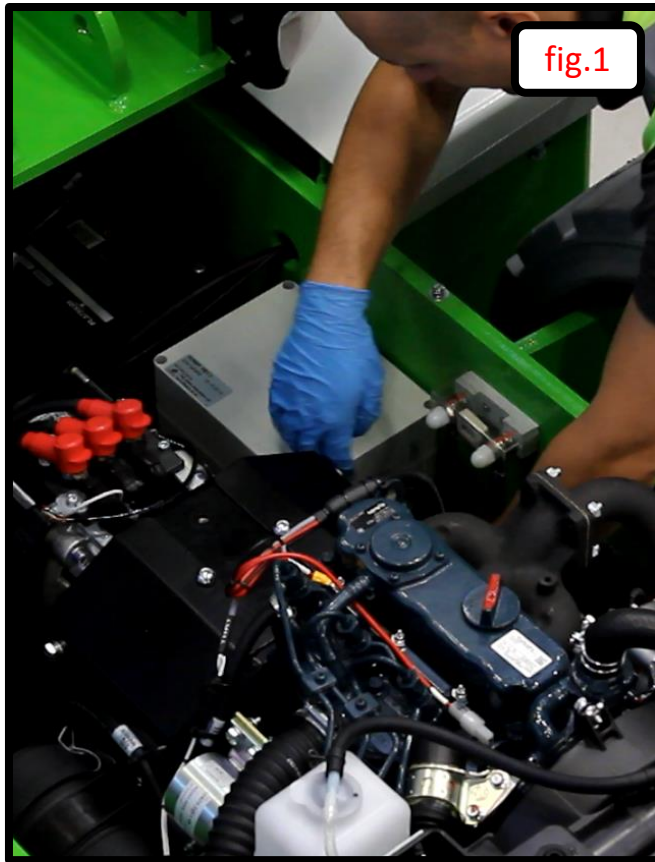
4. Disconnect the 12V battery and remove the bonnet latch

Inside the chassis base locate and disconnect the positive terminal of the 12V battery (fig.1). Use a paint marker to add a location line on the bonnet latch (fig.2) and remove the latch using the 10mm spanner (fig.3).



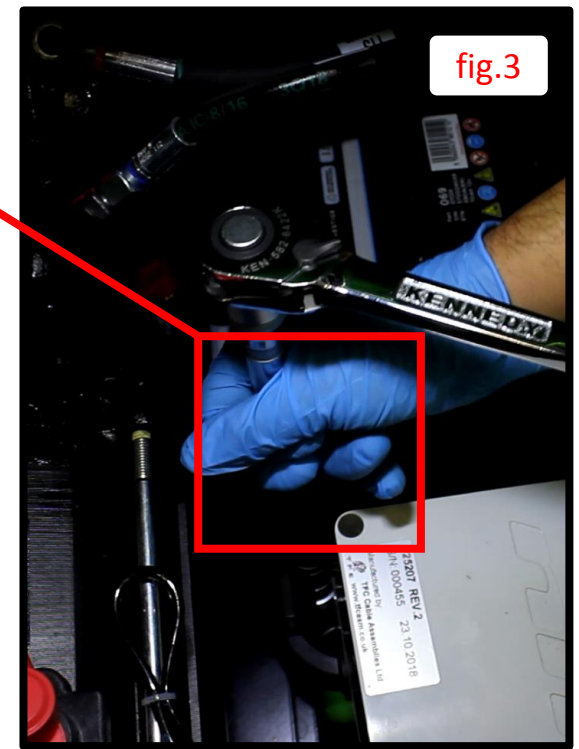
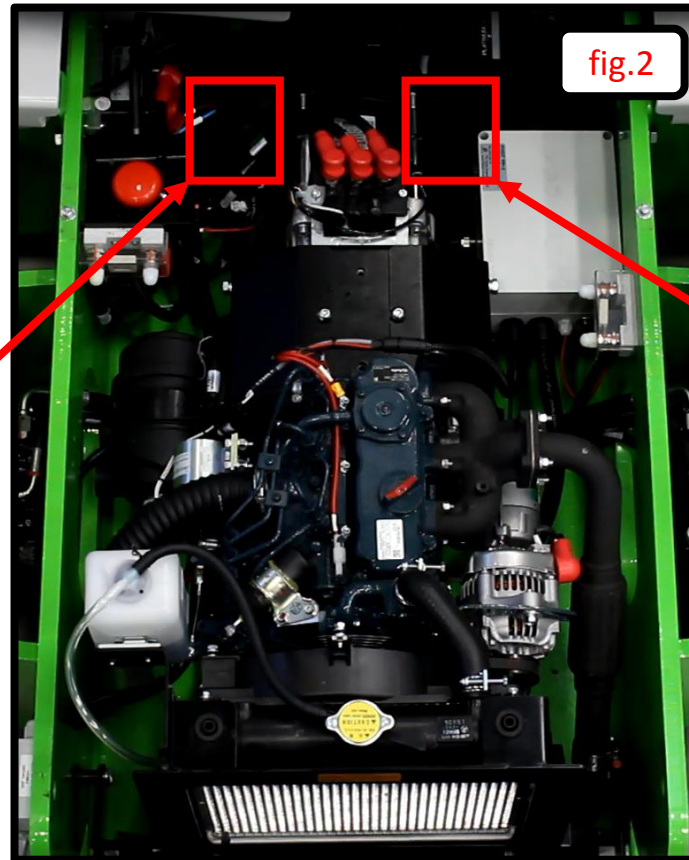
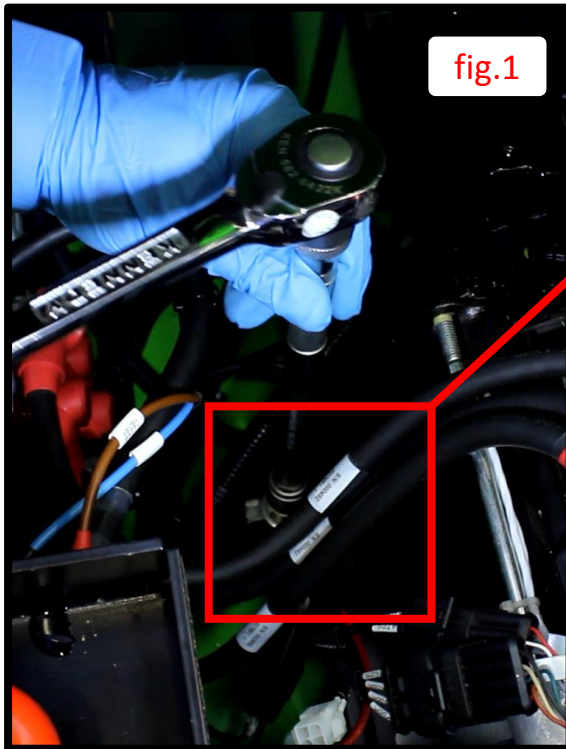
5. Undo base electrical box from chassis

Inside the chassis base locate the main electrical box (fig.1) and using the 17mm socket and ½" drive ratchet undo the 2 bolts securing its mounting brackets to the chassis (fig.2) which are located under the box on the RHS wall of the chassis.



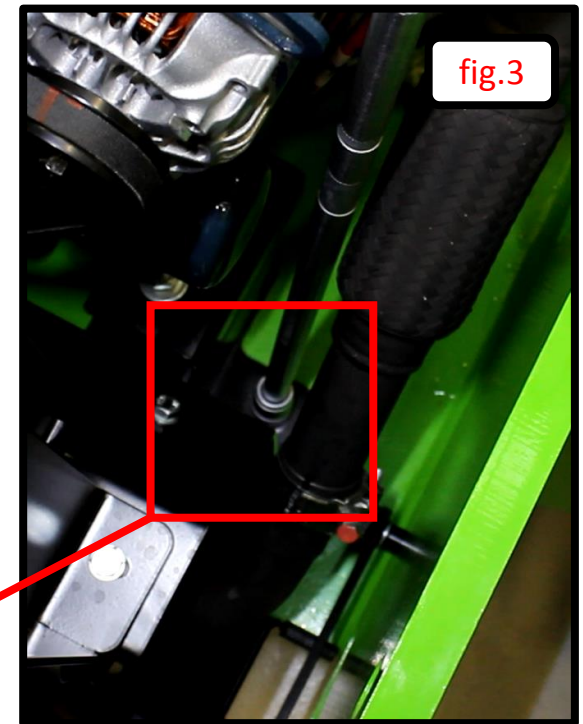
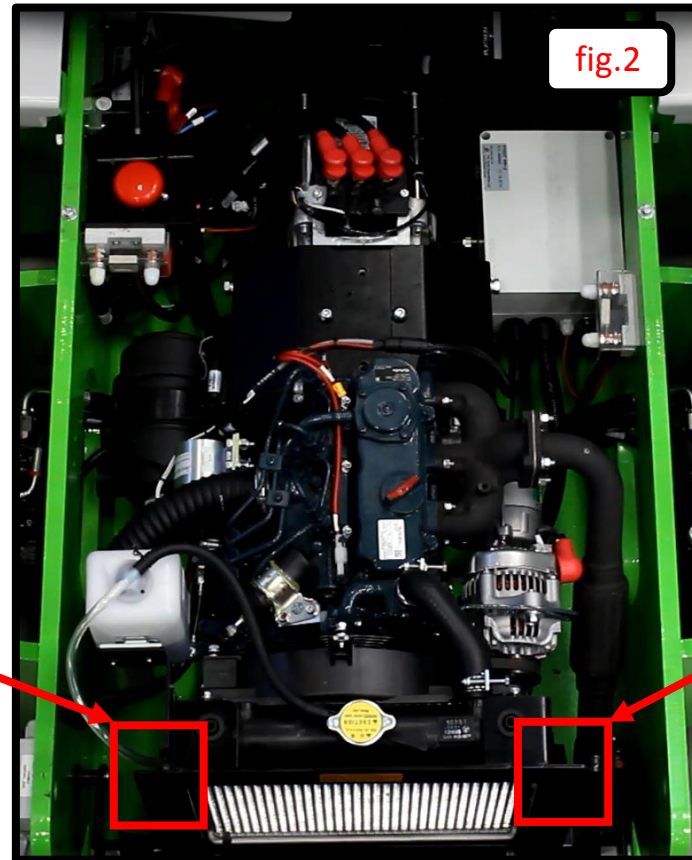
6. Undo the power tray

Using the 17mm socket, ½" drive ratchet and 250mm extension undo the 2 nuts securing the motor cradle to the rubber mounts (fig.1-3).



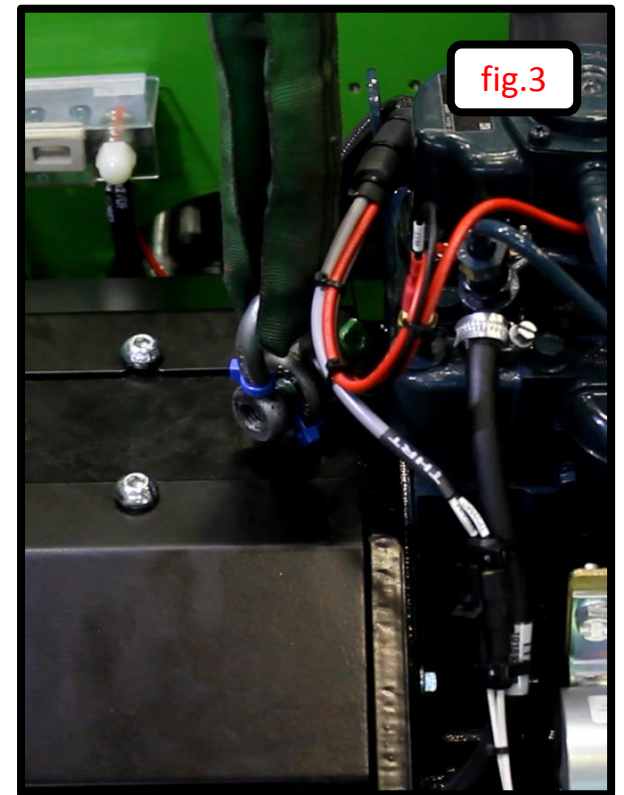
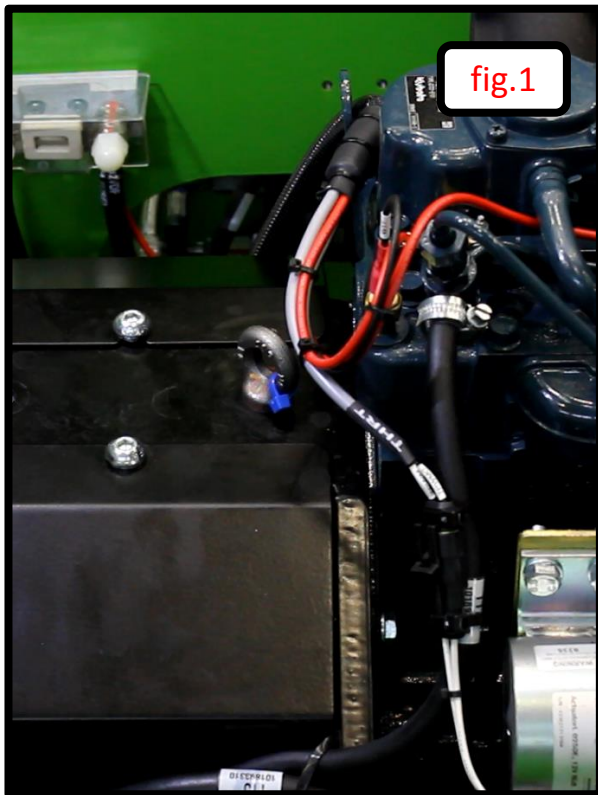
7. Undo the power tray, continued

Using the 19mm socket, ½" drive ratchet and 450mm extension undo the 2 bolts securing the engine mounts to the chassis (fig.1-3).



8. Lift the power tray

Fit an M8 eye bolt capable of lifting minimum 250kg into the M8 tapped hole on top of the motor cradle closest to the engine (fig.1), to the lifting eye attach a suitable sling/tackle arrangement, also rated for lifting minimum 250KG, and connect to a crane or lift capable of the same minimum capacity (fig.2&3).



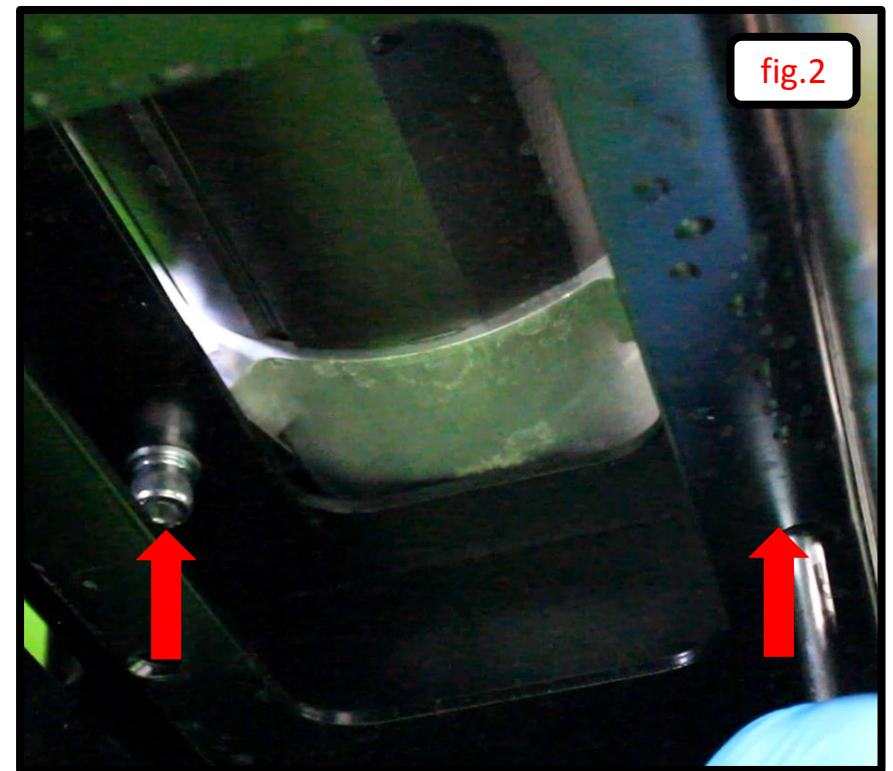
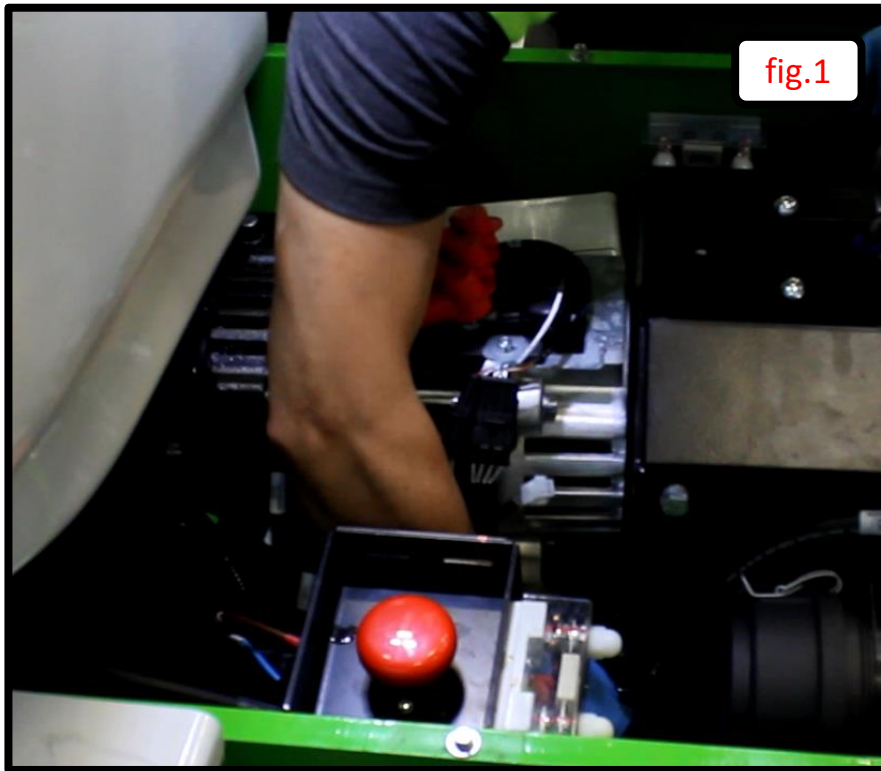
9. Lift the power tray, continued

Lift the power tray up so the underside of the motor cradle is accessible (fig.1) and fit wooden chocks under the power tray (fig.2).



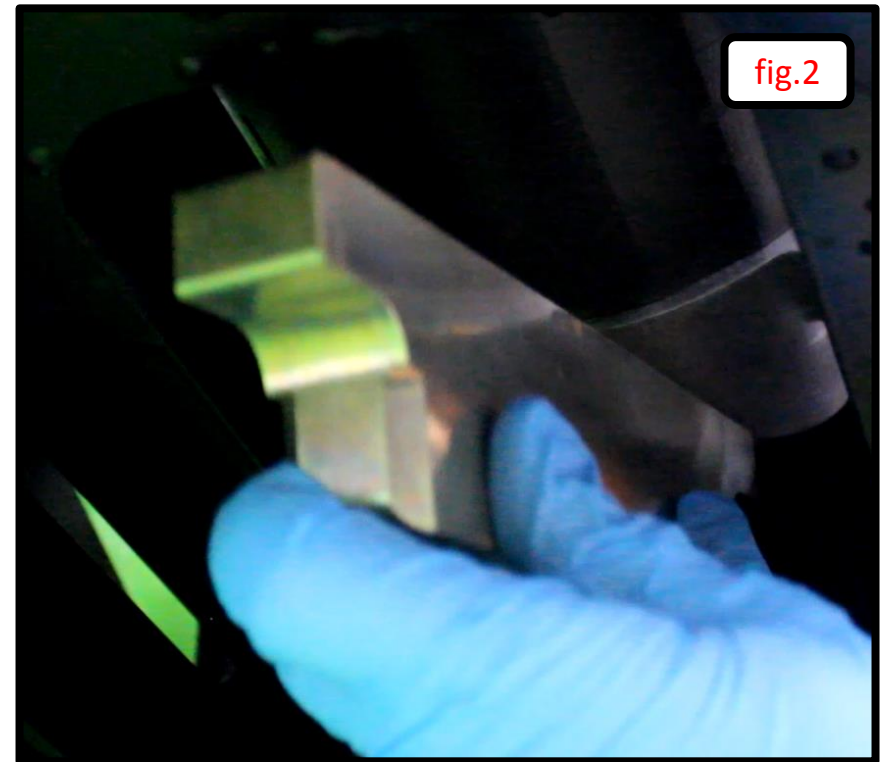
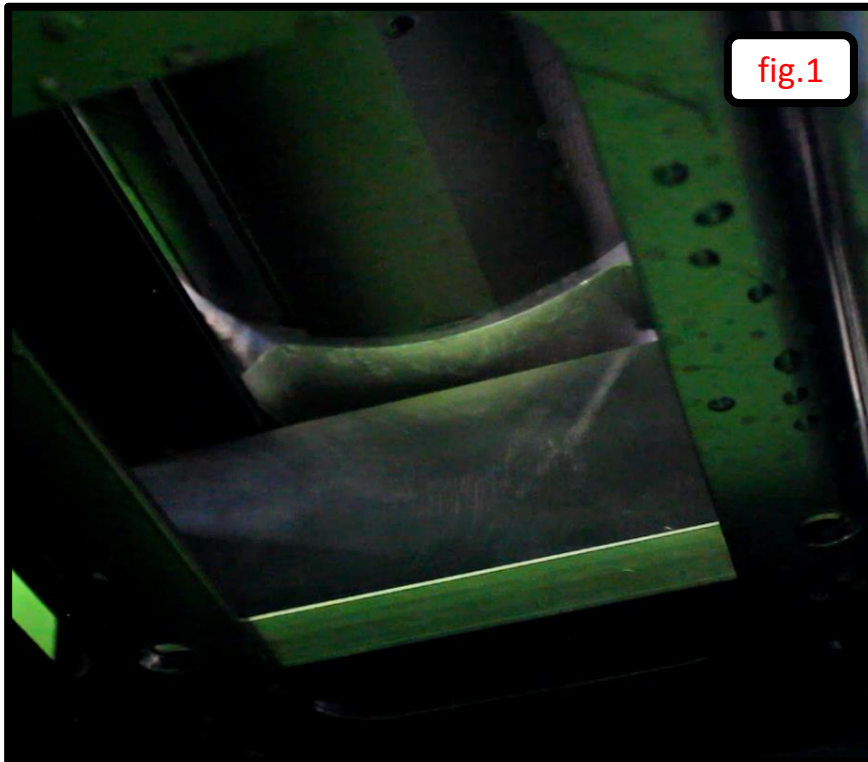
10. Remove the motor bolts

Locate the 2 bolts closest to the clutch housing securing the motor to the motor cradle (fig.1), and using the 8mm Allen key remove them (fig.2).



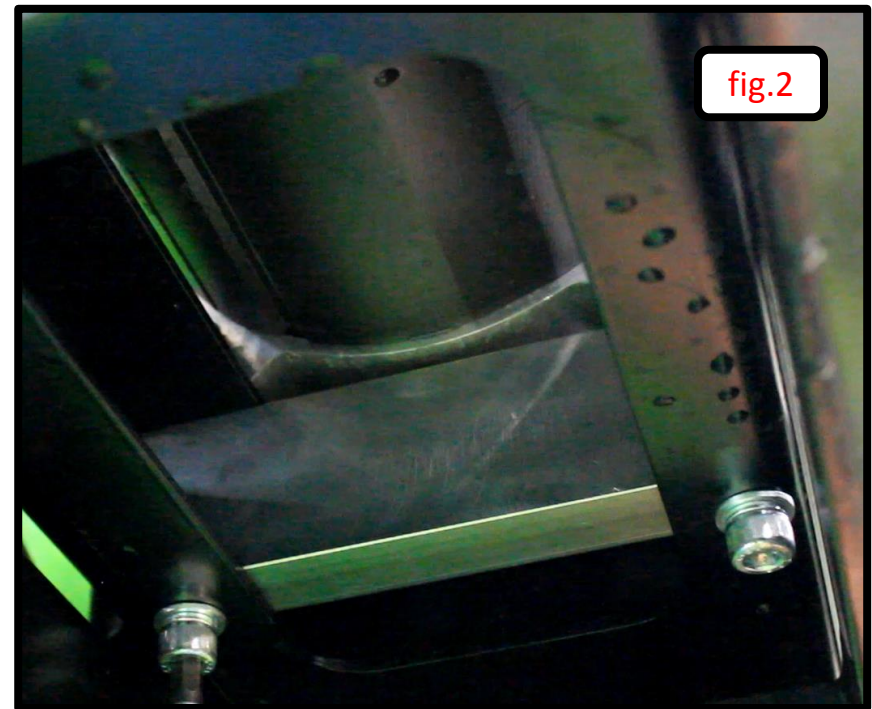
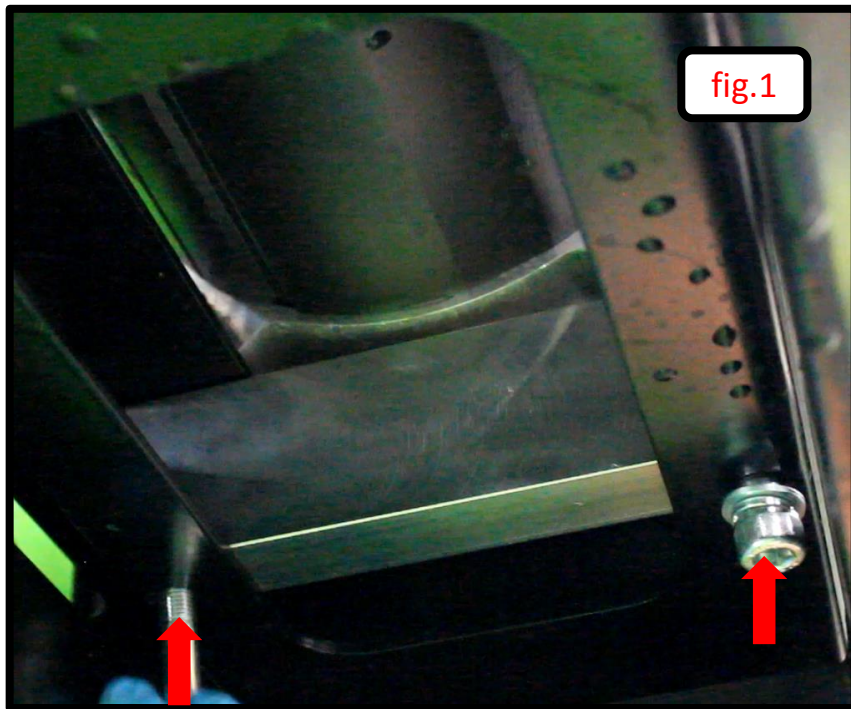
11. Fit P32400

From underneath the motor cradle insert P32400 (fig.1) and rotate through 90° so that it fits between the top and bottom support of the motor cradle (fig.2).



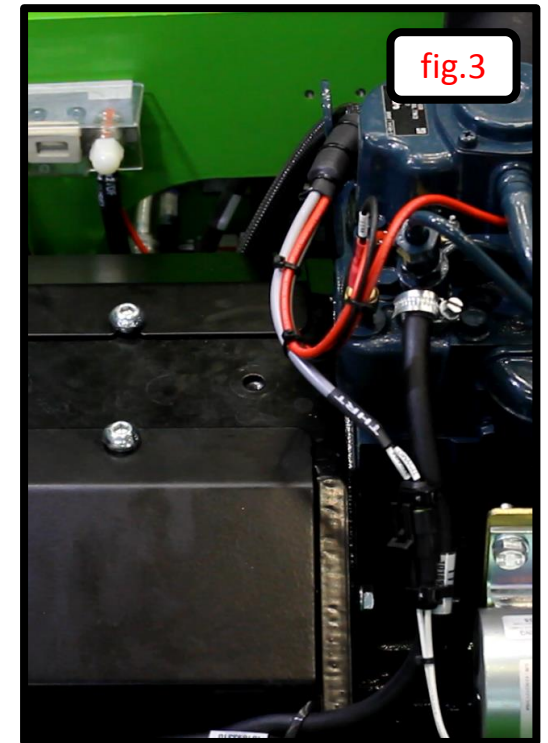
12. Fit and tighten new bolts

Line the holes of the P32400 up with the motor cradle holes, insert the new M10x80x1.25(fine) 12.9 Cap Head bolt (fig.1) and fully tighten using the 8mm Allen key (fig.2).



13. Lower the power tray

Remove the wooden chocks (fig.1) and lower the power tray down so that its mounting points locate with their original positions (fig.2). Finally remove all lifting equipment attached to the power tray (fig.3).



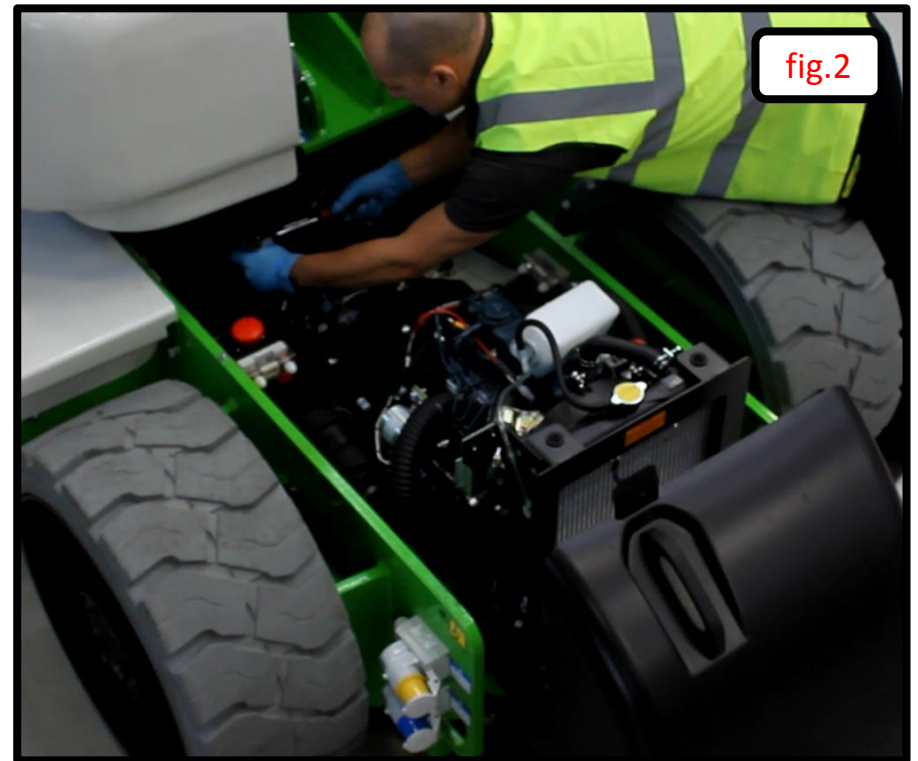
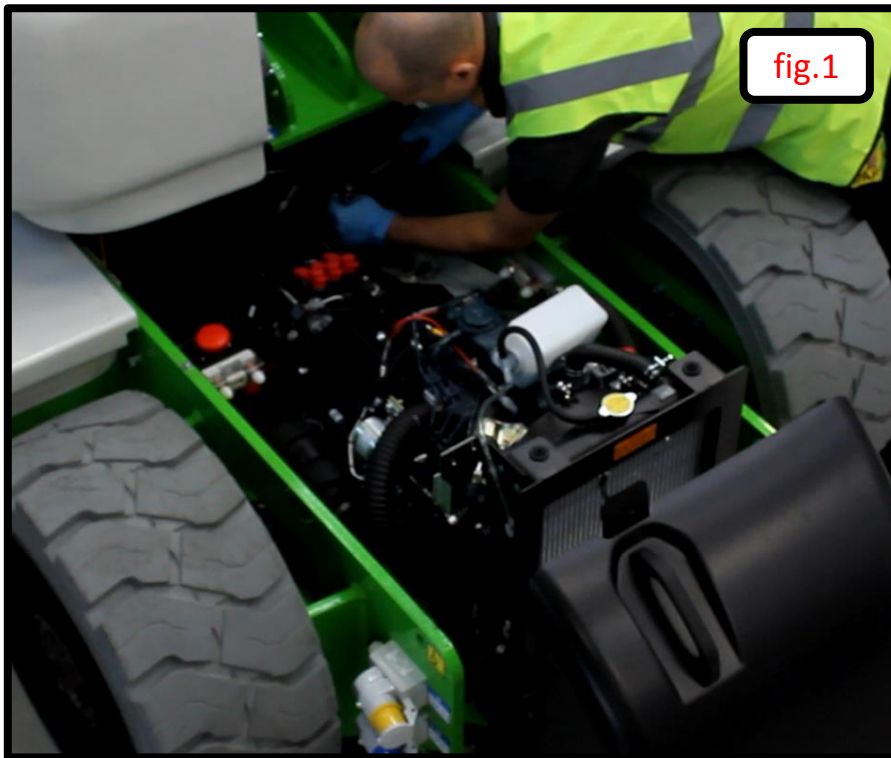
14. Secure the power tray to the chassis

Using the 19mm socket ½” drive ratchet and 450mm extension tighten the 2 bolts securing the engine mounts to the chassis (fig.1&2).



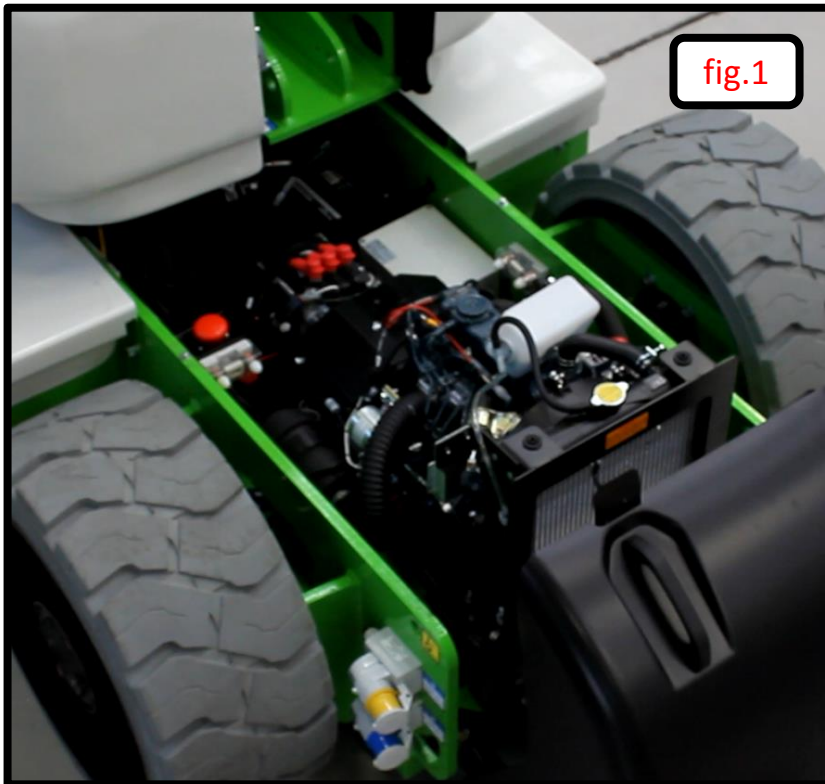
15. Secure the power tray to the chassis, continued

Using the 17mm socket ½” drive ratchet and 250mm extension tighten the 2 nuts securing motor cradle to the rubber mounts (fig.1&2).



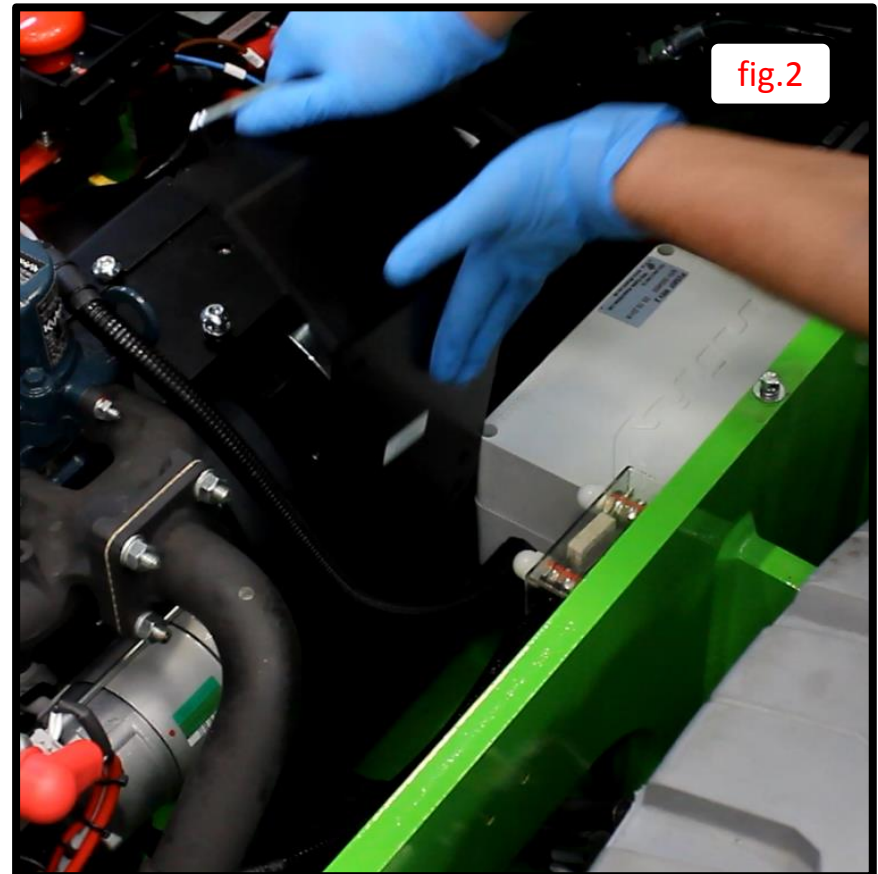
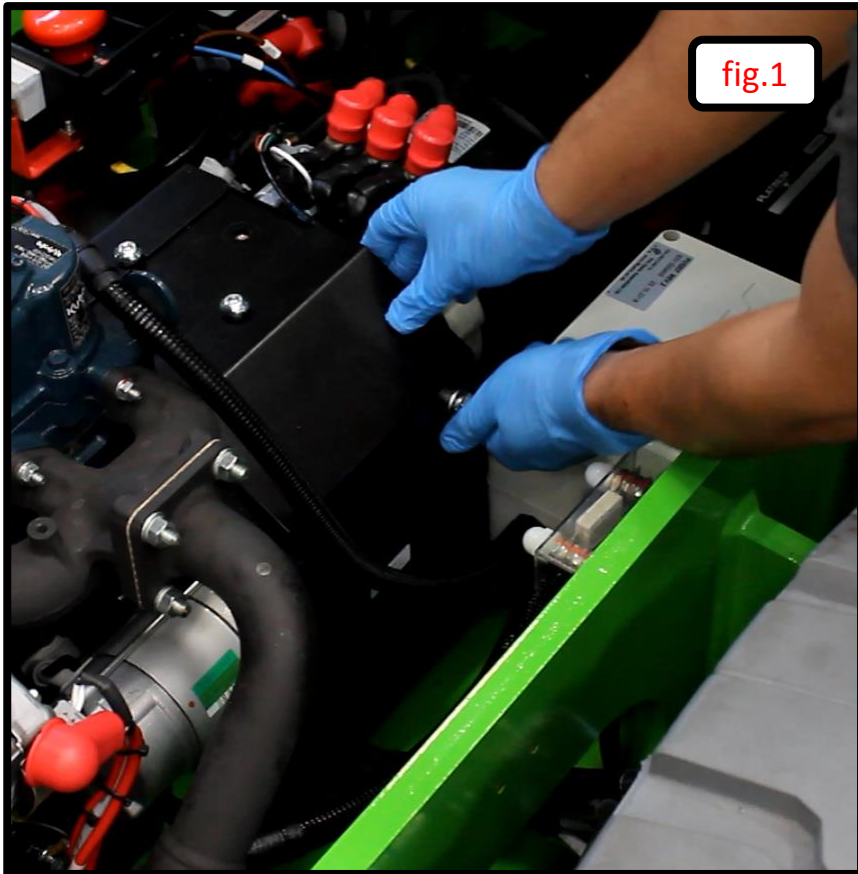
16. Reattach the base electrical box to the chassis

Inside the chassis base locate the main electrical box (fig.1), and using the 17mm socket and ½”drive ratchet re-fit and tighten the 2 bolts securing the electrical box mounting bracket to the chassis (fig.2).



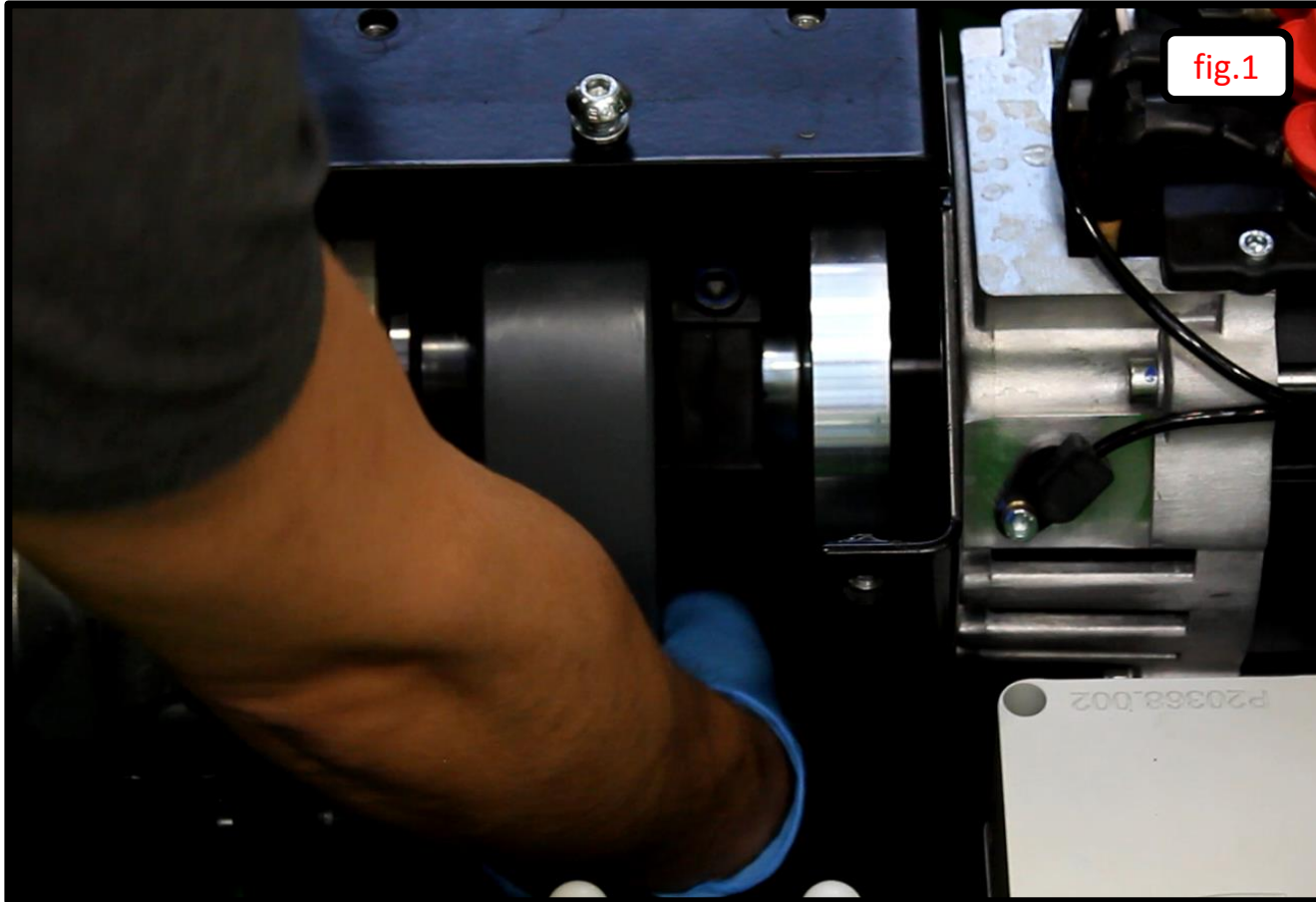
17. Remove the clutch cover

Using the 17mm spanner or socket and 6mm Allen key undo the 3 bolts that secure the clutch cover (fig.1) and remove the clutch cover (fig.2).



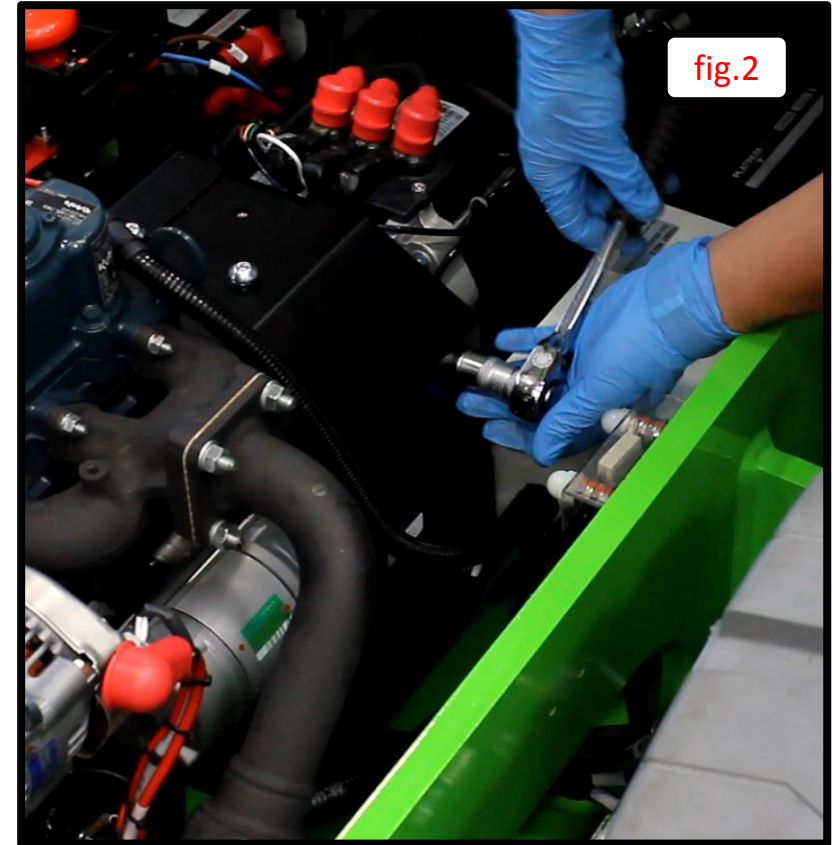
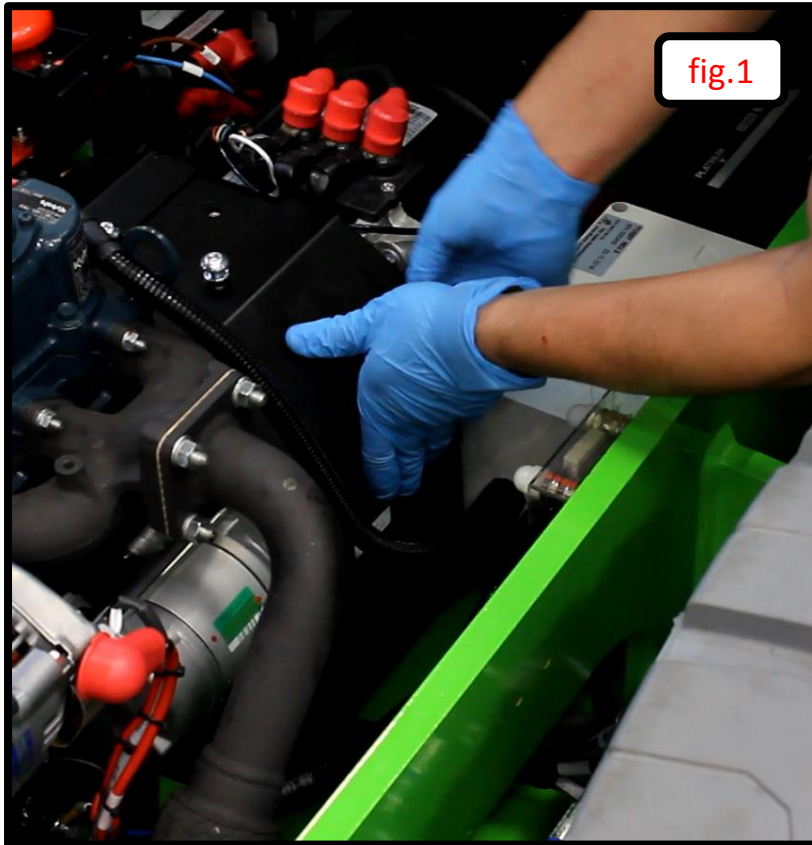
18. Check clutch coupling alignment

Hand rotate the clutch outer casing ensuring that it is free moving (fig.1) .



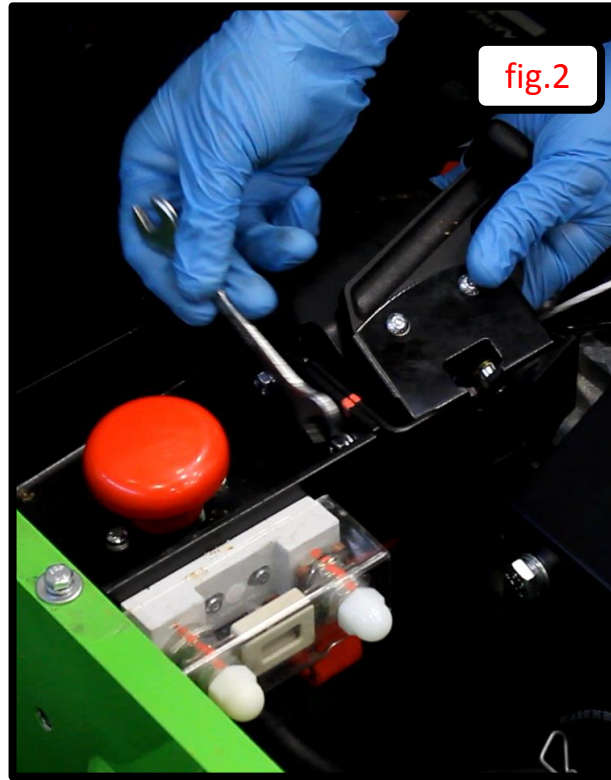
19. Replace the Clutch cover

Replace the clutch cover (fig.1) and using the 17mm spanner or socket and 6mm Allen key tighten the 3 bolts that secure the clutch cover (fig.2).



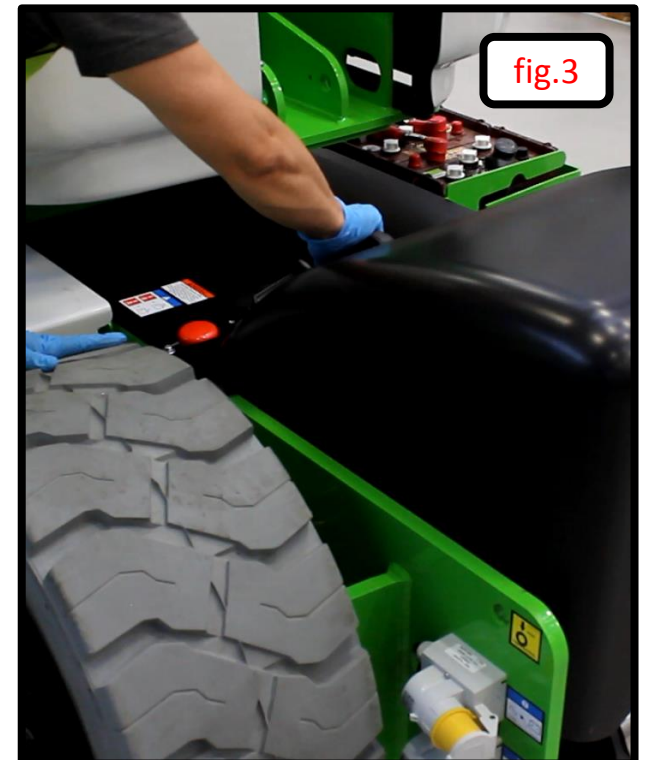
20. Re-fit the bonnet latch and re-connect the 12V battery

Line up the paint marker added before removal (**fig.1**) and re-fit the latch using the 10mm spanner (**fig.2**). Inside the chassis base locate and re-connect the positive terminal of the 12V battery (**fig.3**).



21. Replace the centre cover and bonnet

Remove the right hand battery cover and slide the centre bonnet in slightly before lining the fastener holes up (fig.1). Fit the 2 centre cover fasteners (fig.2) to secure the cover, close the bonnet and check the latch is secure (fig.3).



22. Re-connect the Hybrid batteries

Open the control side battery canopy (fig.1), locate and replace the positive connection (fig.2) and replace the battery cover.



23. Un-isolate the machine

Pull out the red isolator located in the centre cover (fig.1), turn the machine key switch to on (fig.2) and finally return the links to the stowed position.

