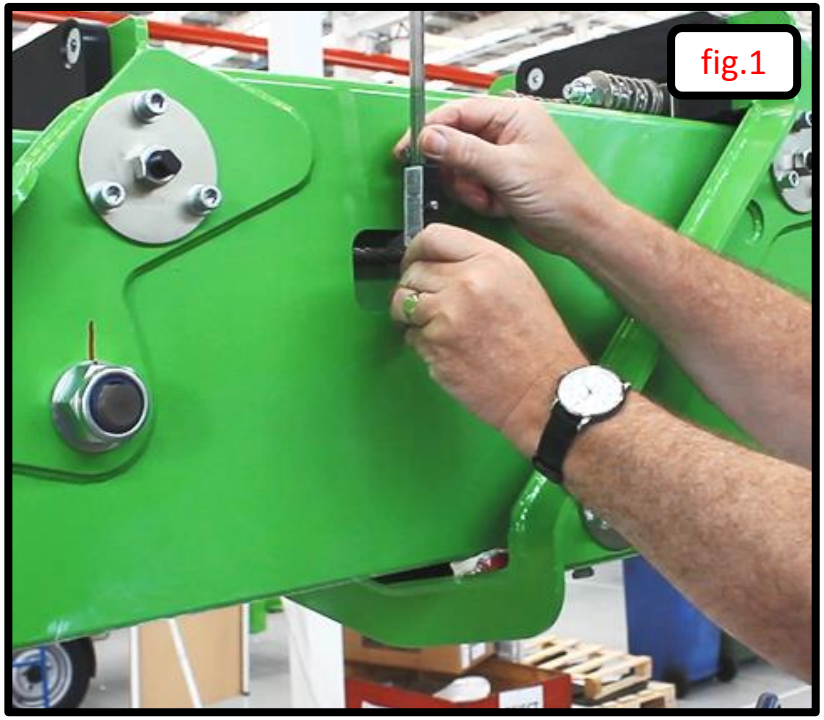
Wire Rope Inspection Checks	
Instruction No.: HR28_CI05	**Product:** HR28
Operation: Perform the wire rope safety checks	
Health & Safety Considerations:	 Standard Practices Only
Tools Required: Vernier Calliper, Tape Measure, Magnetically Mounted Torch, Pliers, Action Camera	
Consumables Required: None	
Parts Required: P32552 – Magnetic Bracket Assembly	
Notes/Other References: HR28 Wire Rope Inspection & Maintenance Manual	

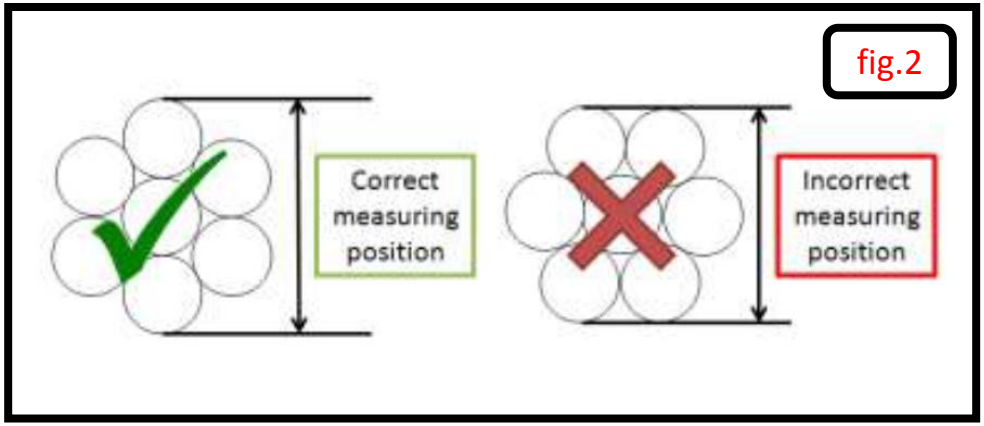
1. Extend the tele booms out.

Using the base controls (fig.1) extend the tele boom out, approximately 1m (fig.2), to expose the rope access windows locate on each side of the middle tele section (fig.3).

2. Measure the diameter of the wire ropes.

Using the Vernier's measure both of the rope diameters across two opposite strand bundles (fig.1 & fig.2).





3. Check the outer rope anchor ends.

Using the tape measure check that; 6 threads, ≈10mm, are showing through the locknuts (fig.1), both adjusters are approximately equal (fig.2) and both sets of Belleville washers are fully compressed (≈7.5-8mm total stack length) (fig.3 & fig.4).

fig.1

fig.2

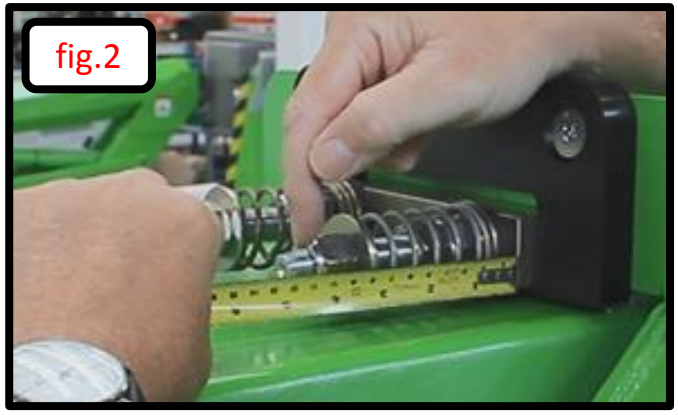
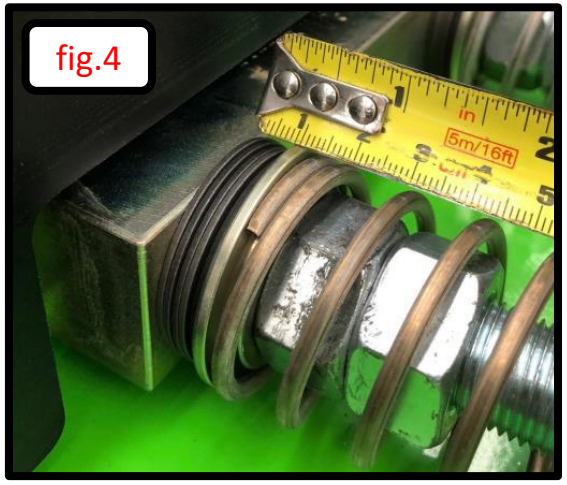


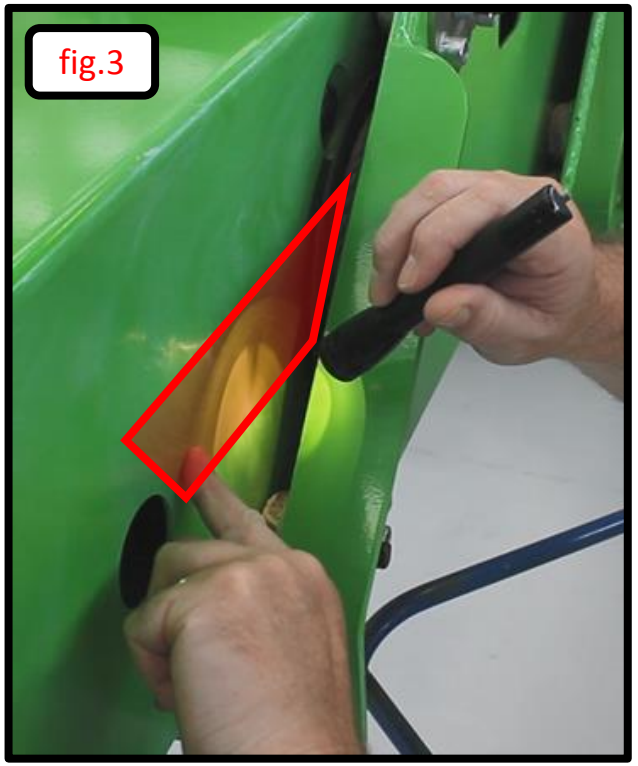
fig.3

fig.4



4. Check the clearance of the pulleys.

Using the torch ensure that both pulleys have sufficient clearance either side of them (fig.1 & fig.2) and that neither tele section has signs of fouling damage (fig.3) .

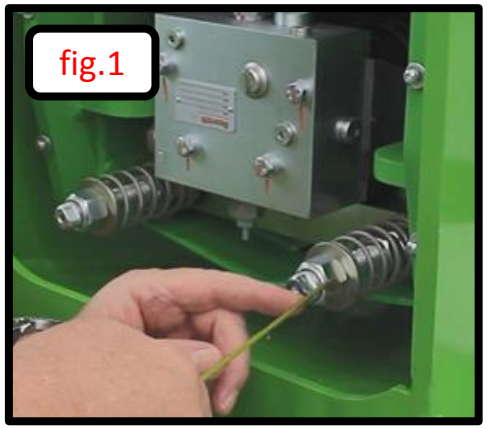


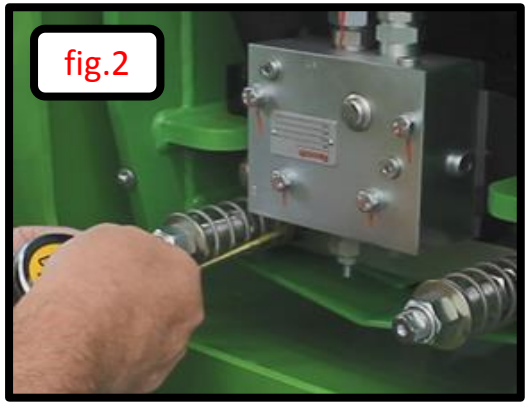
5. Measure the diameter of the front wire ropes.

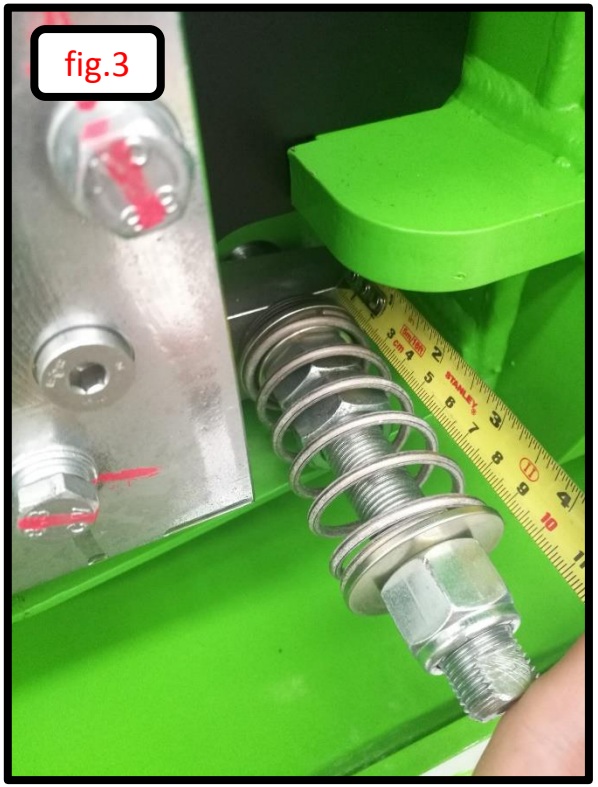
Using the Vernier's measure both of the rope diameters across two opposite strand bundles (fig.1). Ensure both ropes run straight and parallel along the bottom of the outer tele section (fig.2 & fig.3).

6. Check the front rope anchor ends.

Using the base controls retract the tele booms fully in, and then using the tape measure check that; 6 threads, ≈10mm, are showing through the locknuts (fig.1), both adjusters are approximately equal (fig.2) and both sets of Belleville washers are fully compressed (≈7.5-8mm total stack length) (fig.3).

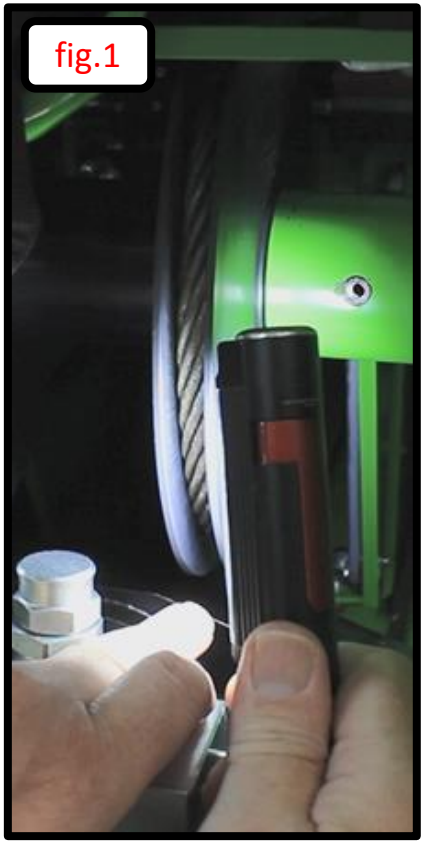


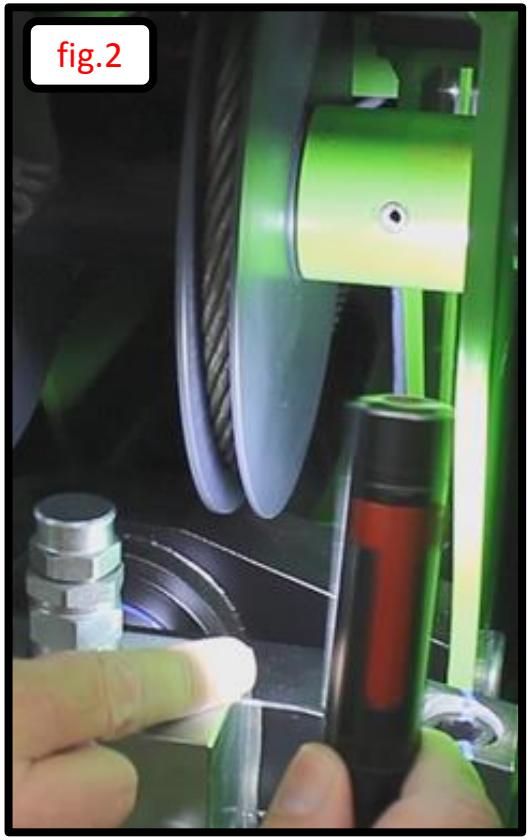




7. Check the clearance of the front pulleys.

Using the torch ensure that both pulleys have sufficient clearance either side of them (fig.1) and that neither tele section has signs of fouling damage. Again ensure both ropes run straight and parallel with the tele section (fig.2).





8. Check the wire ropes for broken strands (2 persons required).

While one operator slowly extends the tele booms out (fig.1) the other, using the rope inspection windows, checks the entirety of the ropes for loose strands (fig.2 & fig.3), if found a strand should not be cut, instead using pliers move the strand side to side until it comes away (fig.4).

fig.1

fig.2

fig.3

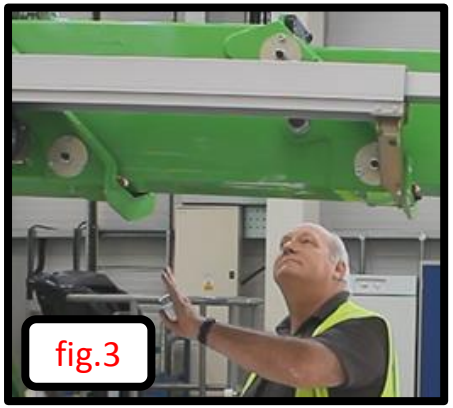
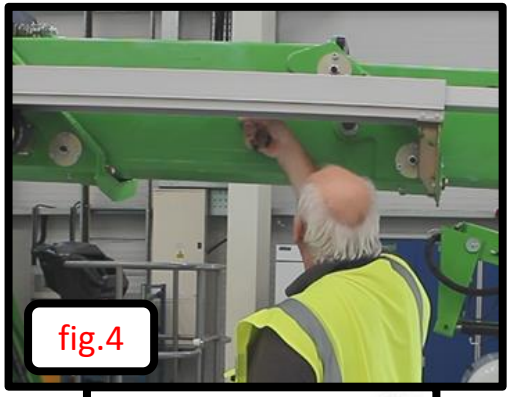
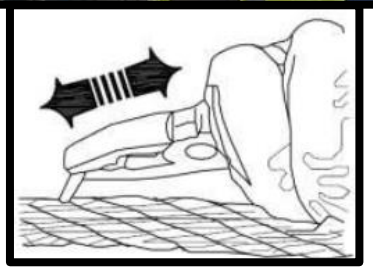


fig.4





9. Fit the remote camera to the tele boom section.

Extend the tele boom out by ≈300mm to gain access the top of the middle tele boom section (fig.1). Using P32552 with the camera mounted, position the action camera within the boom in line with one of the pulleys (fig.2 & fig.3), additionally position the magnetic torch to increase visibility (fig.4).

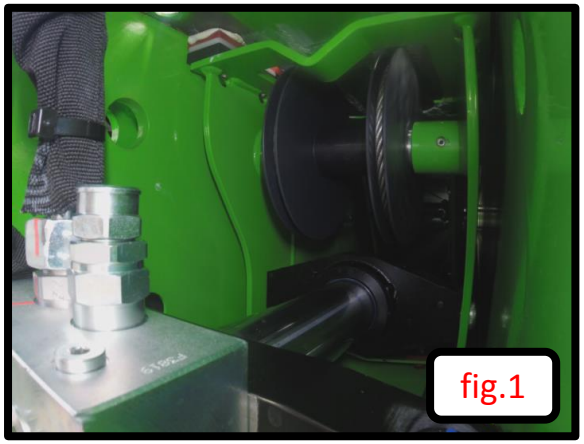


fig.1


fig.2


fig.3

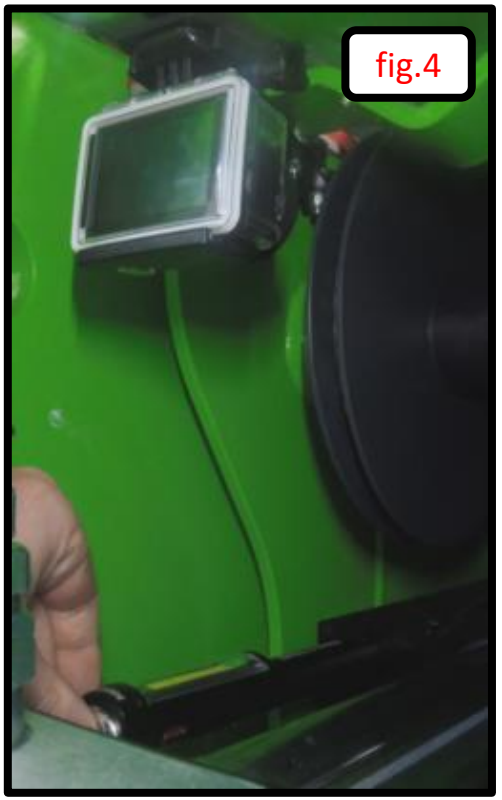


fig.4

10. Record the tele boom being extend.

Record the wire rope whilst the tele boom is extend fully out (fig.1 & fig.2 & fig.3). Once recorded review the footage and note all damage. Bring the tele boom back in to the '300mm out' position, as to not damage your equipment, then repeat this process on the second pulley and rope.