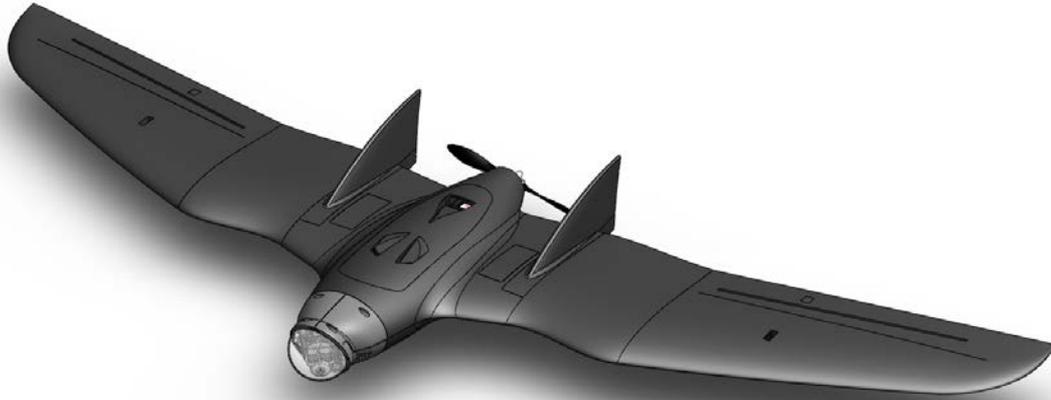


# RV P&T – Modular front viewing camera solution for the RV-Jet



## Features:

- Robust crystal clear dome
- No optical distortion
- Unique modular camera gimbal
- Compatible with GoPro 1&2
- Fits most micro cameras with 14mm lens (12mm thread)
- 100% play free pivot axis
- 170 degree pan and tilt angles (reduced for GoPro)
- Configurable for pan&tilt and tilt&pan





## **GoPro Pan&Tilt**

- *Primary axis: Pan*
- *Secondary axis: Tilt*
- *GoPro Hero 1&2*
- *Anti-reflection screen*
- *Lens protection*
- *Access to:*
  - *Buttons*
  - *SD card*
  - *USB port*
  - *A/V outputs*
  - *Rear connector*



## **Mico Camera Pan&Tilt**

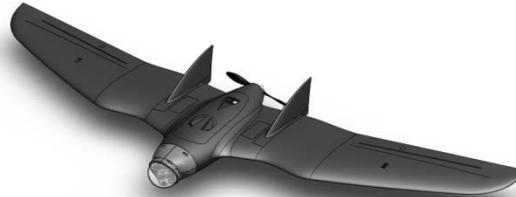
- *Primary axis: Pan*
- *Secondary axis: Tilt*
- *Fits most common micro cameras (KX191, KX171, KX6, DX201, etc.)*
- *Clamp fixing around 14mm lens*
- *Screw fixing possible*
- *Anti-reflection screen*
- *170 degree pan and tilt angle*



## **Micro Camera Tilt&Pan**

- *Primary axis: Tilt*
- *Secondary axis: Pan*
- *Fits most common micro cameras (KX191, KX171, KX6, DX201, etc.)*
- *Clamp fixing around 14mm lens*
- *Screw fixing possible*
- *Anti-reflection screen*
- *170 degree tilt and pan angle*

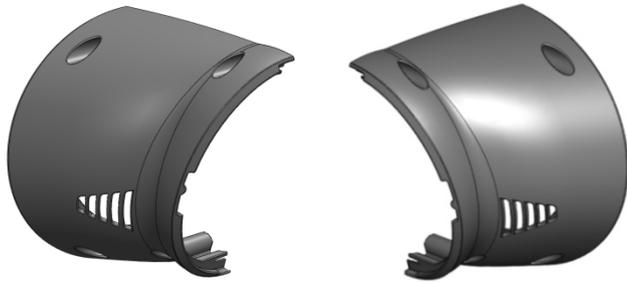
# RV P&T – Modular front viewing camera solution for the RV-Jet



## **!! IMPORTANT !!**

- Please read through the **complete** instructions prior to assembly and follow them...
- The supplied screws are specially designed for assembly and disassembly but:
  - **Do NOT over-tighten the screws – you will strip the thread of the plastic parts!!!** -
- The interface between the ring and the camera holders is difficult to disassemble due to our tight tolerances. Please follow **all** steps before snapping the camera holder into this ring. You are warned!
- The dome is of extreme high quality. The material used is clearer than glass but of course vulnerable to scratches. Treat it in the same way as you treat your precious camera lenses!

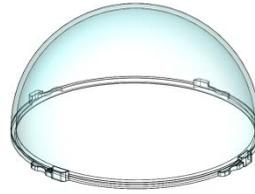
# RV P&T – Parts overview



1x



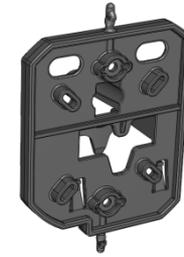
1x



1x



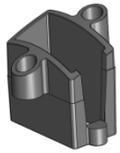
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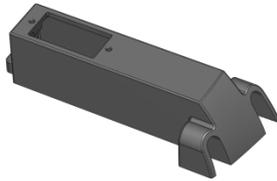
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1x



1x



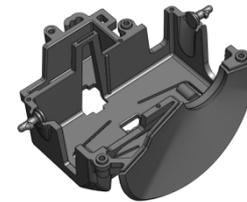
1x



2x



2x



1x



1x



6x



6x



6x



6x



20x



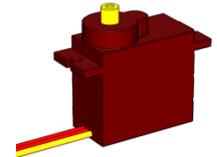
1x



1x



2x



2x



1x



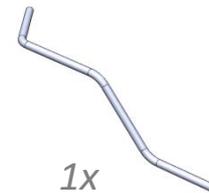
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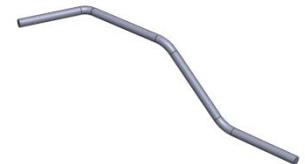
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1x



1x

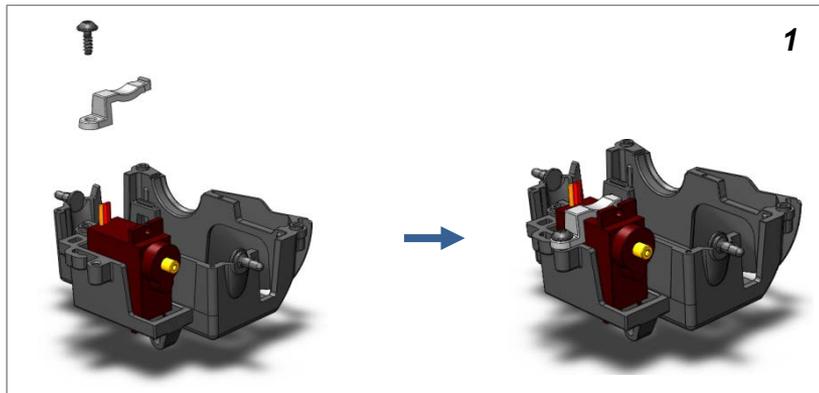


1x

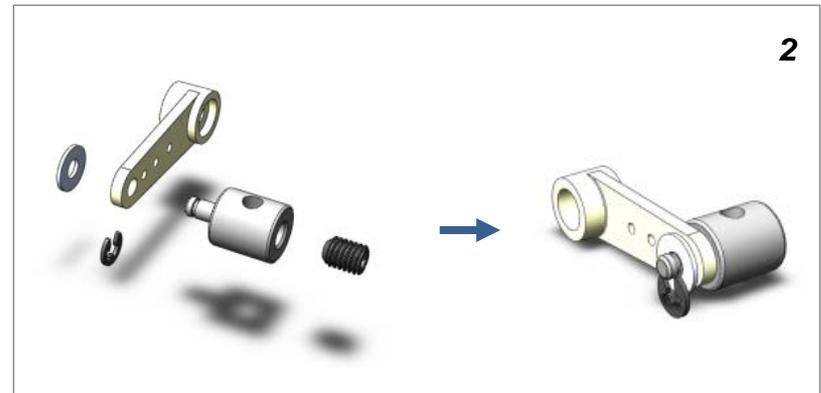
*Assembly Instructions for the RangeVideo  
GoPro Pan&Tilt Module*



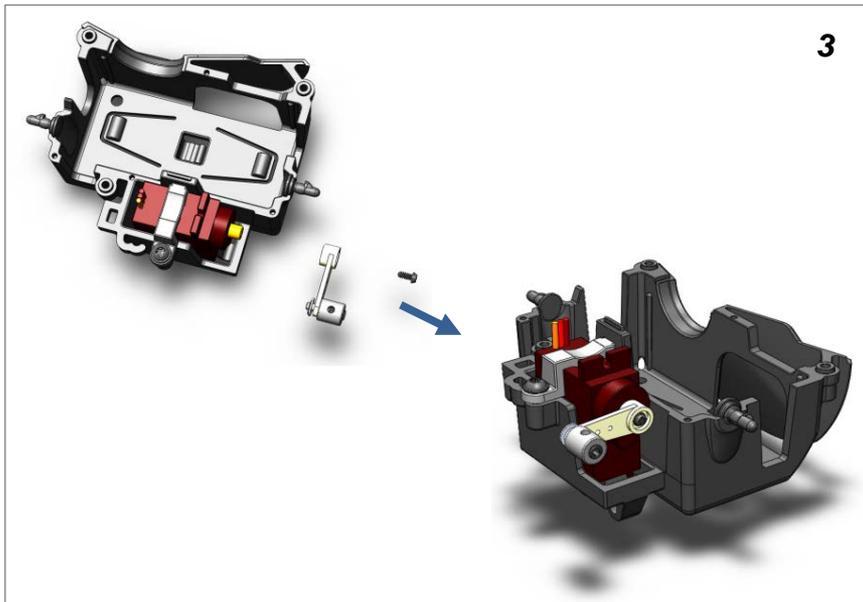
# RV P&T – GoPro Pan&Tilt - Assembly



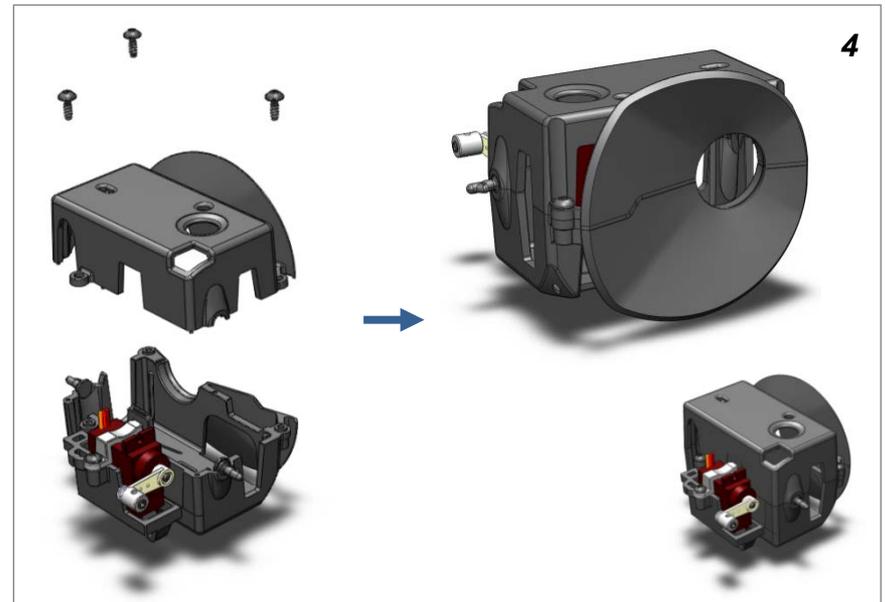
Mount servo and secure with clip and screw [Do not over-tighten!]



Assemble link stopper on servo horn and secure with circlip

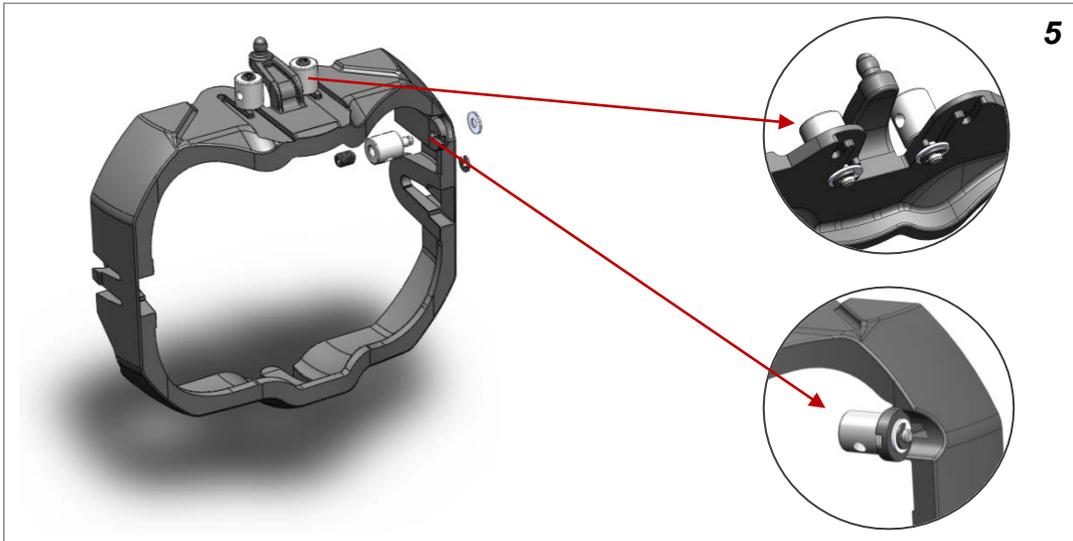


Press the horn on the servo and secure with the screw

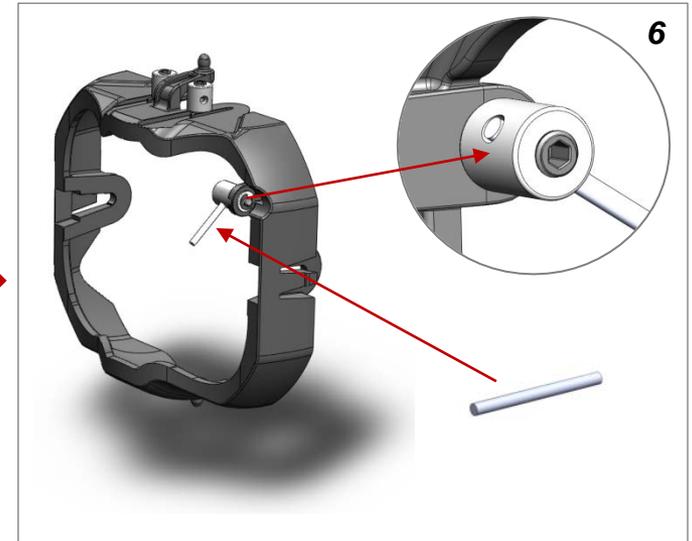


Assemble cover and secure with 3 screws [Do not over-tighten!]  
(In order to avoid scratches, do not insert GoPro yet)

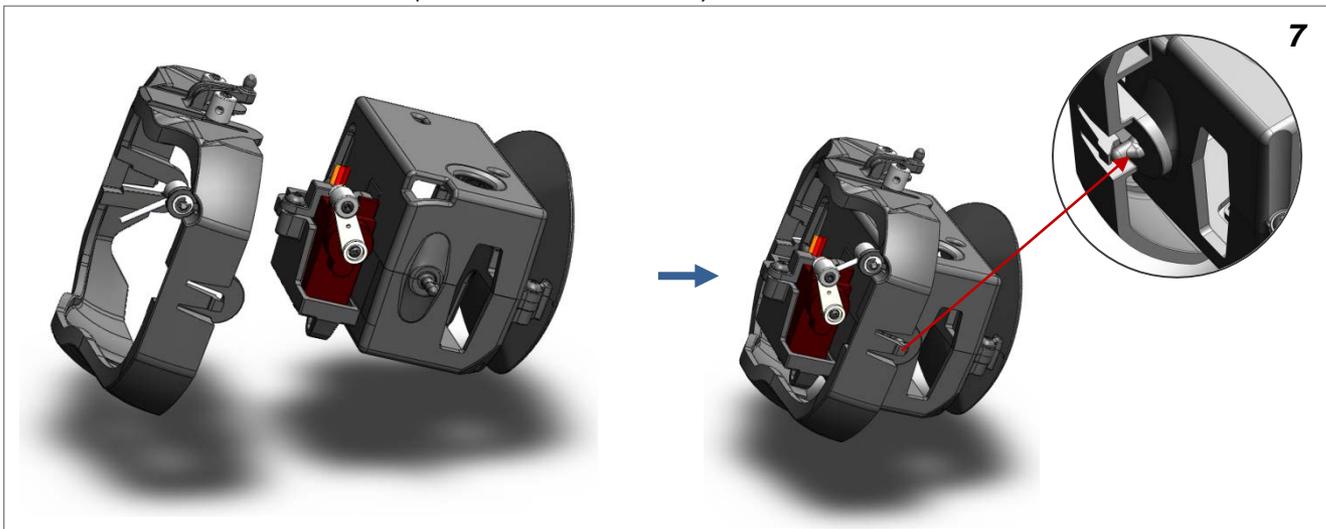
# RV P&T – GoPro Pan&Tilt - Assembly



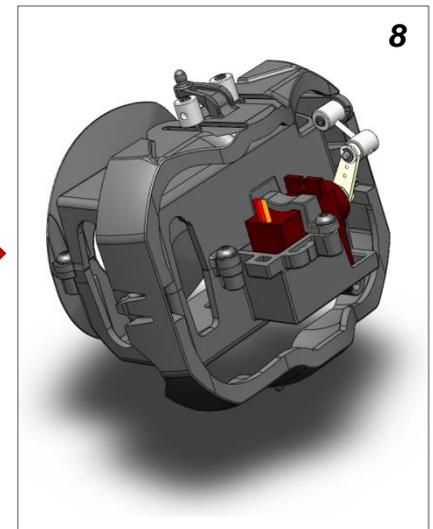
Assemble 3 link stoppers to gimbal ring and secure with circlip according to picture (note which holes are used)



Assemble 18mm push rod (flush with link stopper body)

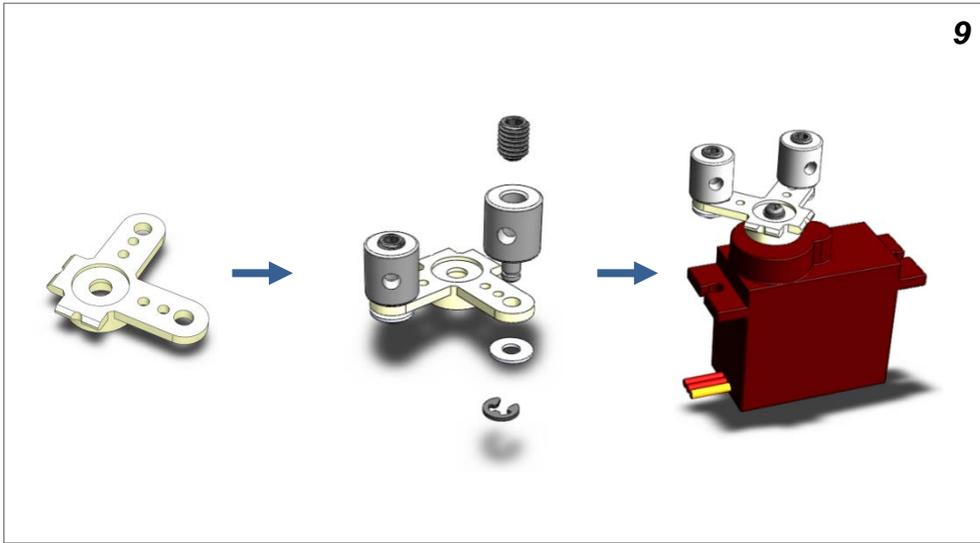


Snap GoPro holder into ring. Make sure not to over-stress the snap features. Once into place it's very difficult to disassemble!

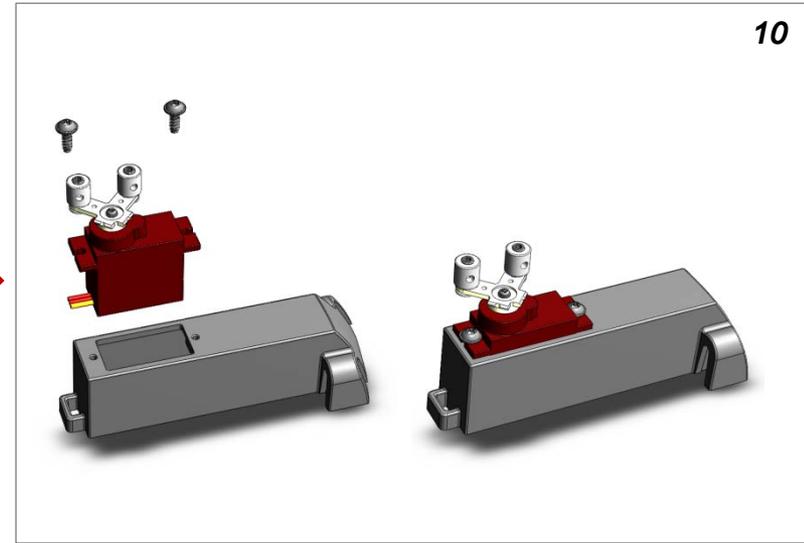


Connect push rod and tighten screws

# RV P&T – GoPro Pan&Tilt - Assembly



Assemble link stoppers to V-shaped servo horn secure with circlips (servo shall be centred)



Insert servo into holder and secure with 2 screws (careful with cable)

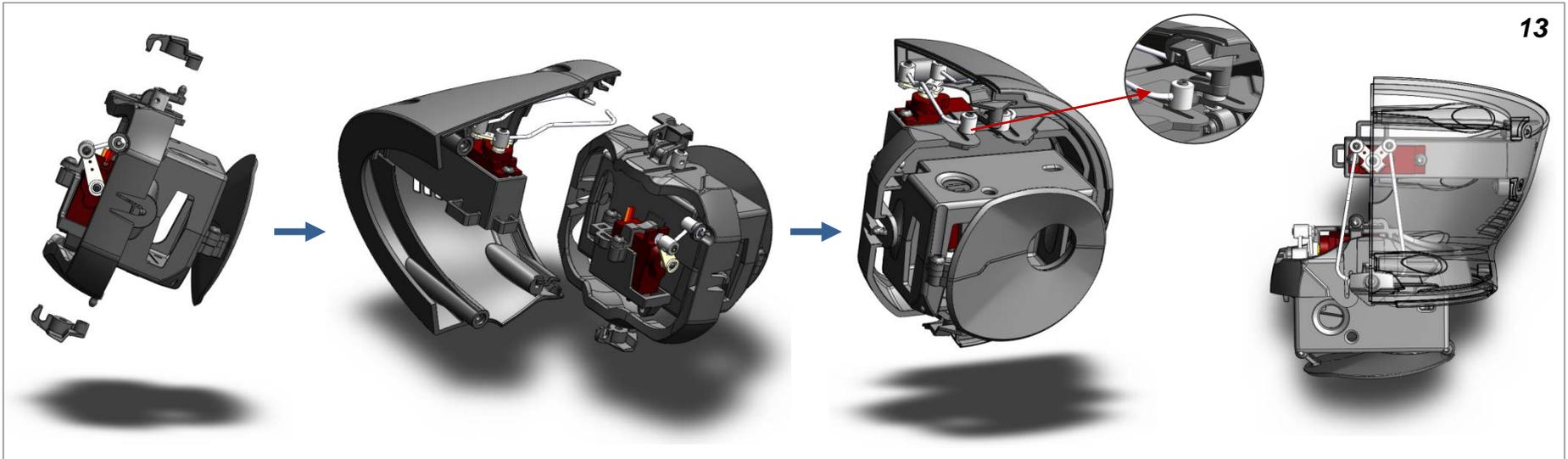


Mount 2 push rods according to picture

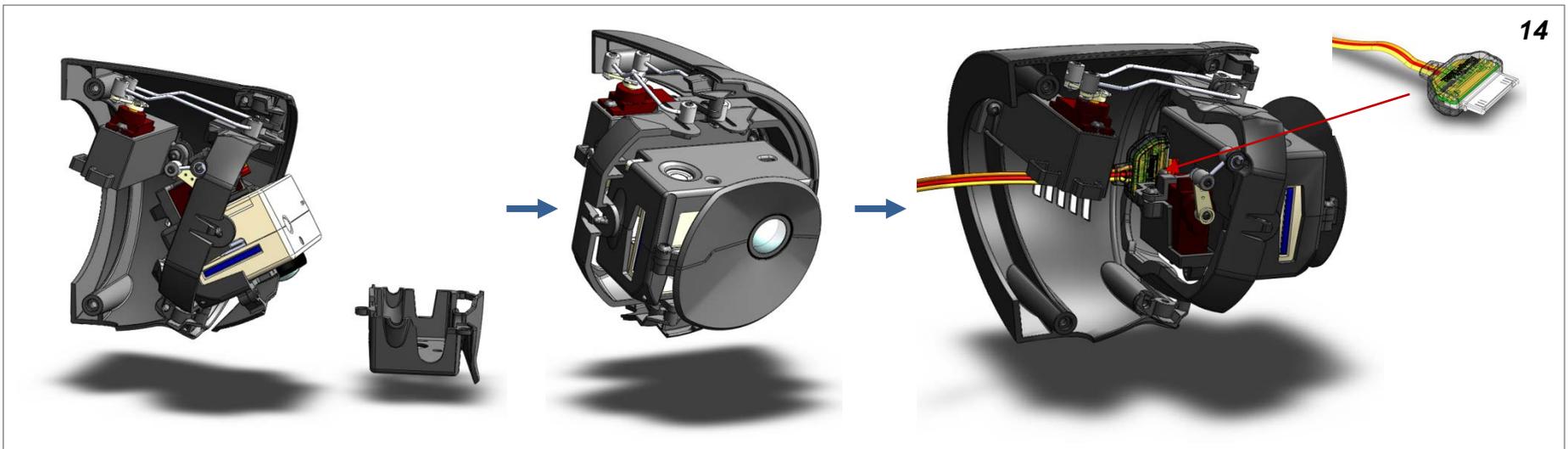


Insert servo assembly into left main housing and secure with 2 screws

# RV P&T – GoPro Pan&Tilt - Assembly

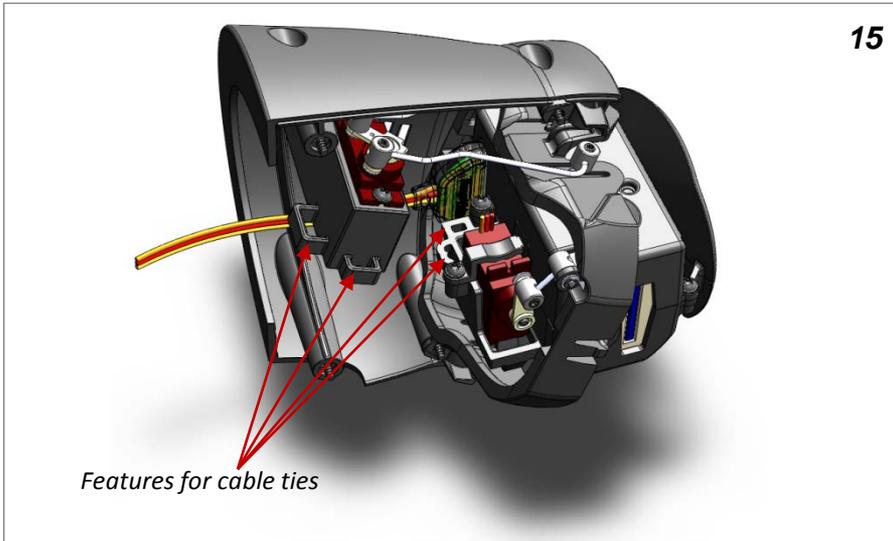


Attach the 2 pivot clips to the gimbal ring and insert into left housing. Insert the push rods into the link stoppers and tighten screws. Make sure everything turns smoothly.

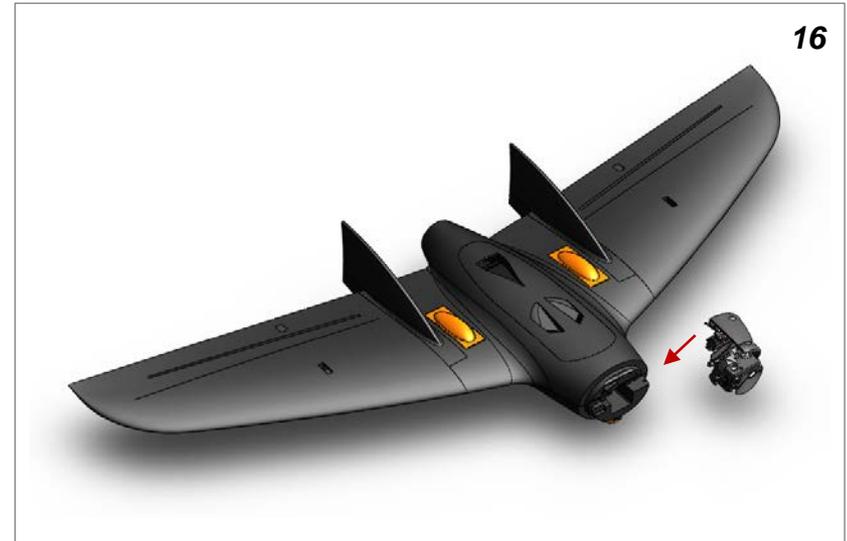


Now remove the GoPro cover and insert your GoPro. Insert the (optional) Range Video GoPro connector for live video-out and in-flight charging. Remount the cover.

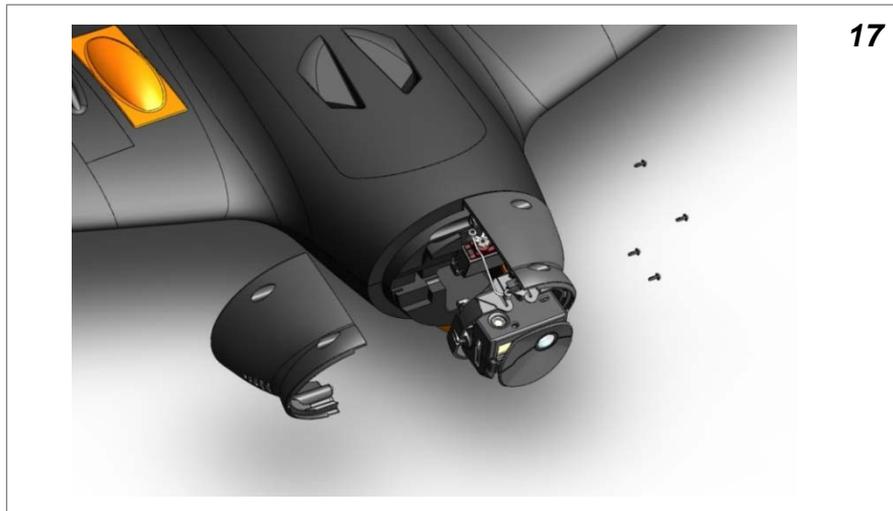
# RV P&T – GoPro Pan&Tilt - Assembly



Route the servo and video cables and fix them with small cable ties to the provided features (make sure you allow enough slack for movement!).



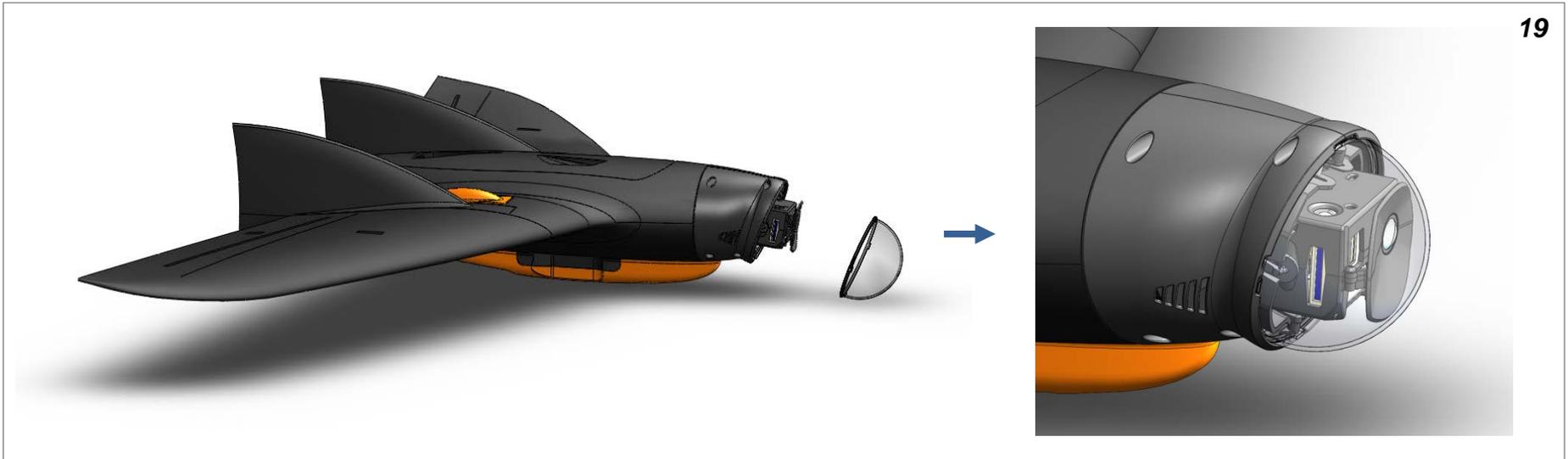
Slide the complete assembly carefully onto the RV-JET fuselage.



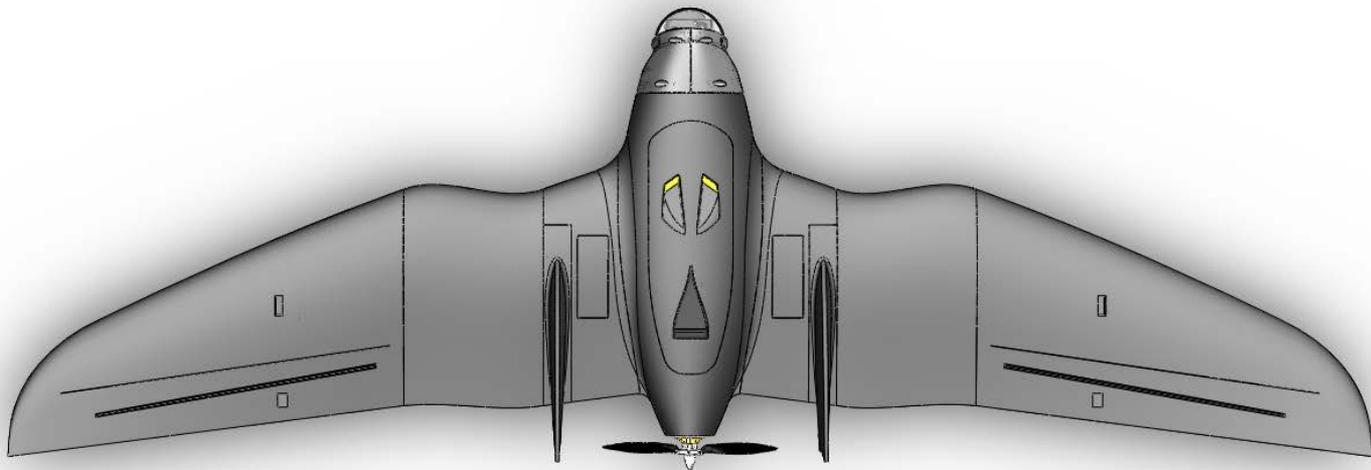
Re-check the cables assemble the right housing half. Secure with 4 screws



Almost done....



*Finally attach the dome and rotate clockwise until it securely snaps into place. Congratulations, you have successfully assembled your RV-GoPro Pan & Tilt!*

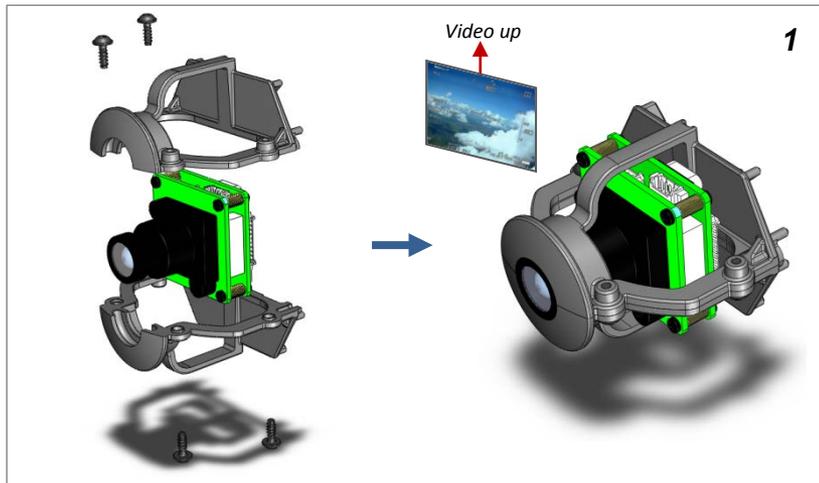


*Time to enjoy...*

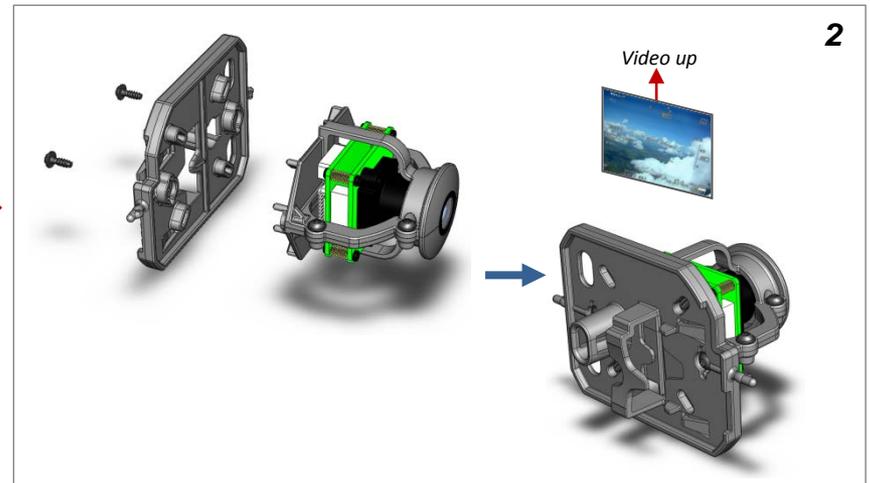
## *Assembly Instructions for the RangeVideo MicroCam Pan&Tilt Module*



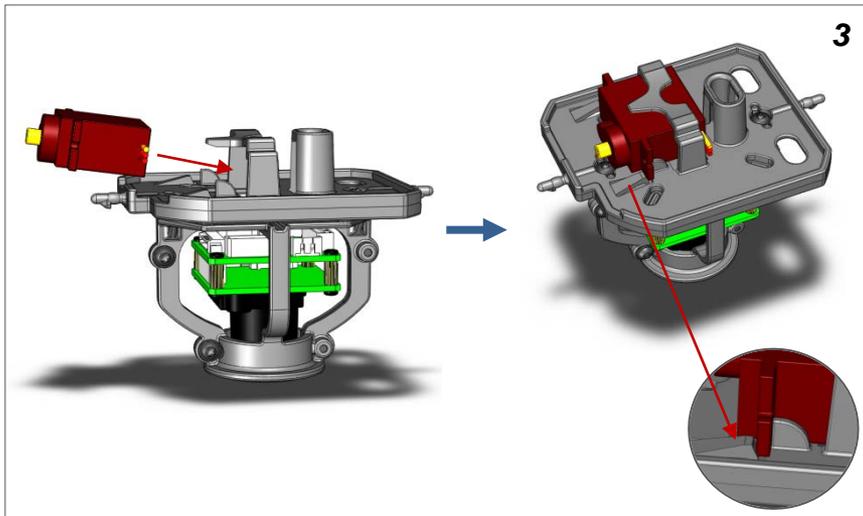
# RV P&T – Micro Camera Pan&Tilt - Assembly



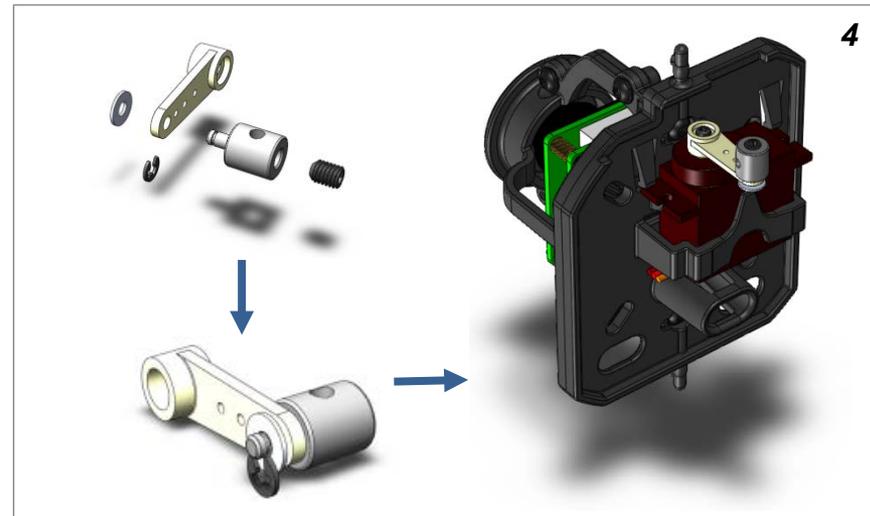
Mount your micro camera between the brackets and tighten the 4 screws (make sure the video orientation is correct!)



Push assembled camera bracket onto base plate and insert 2 screws (Note the video orientation!)

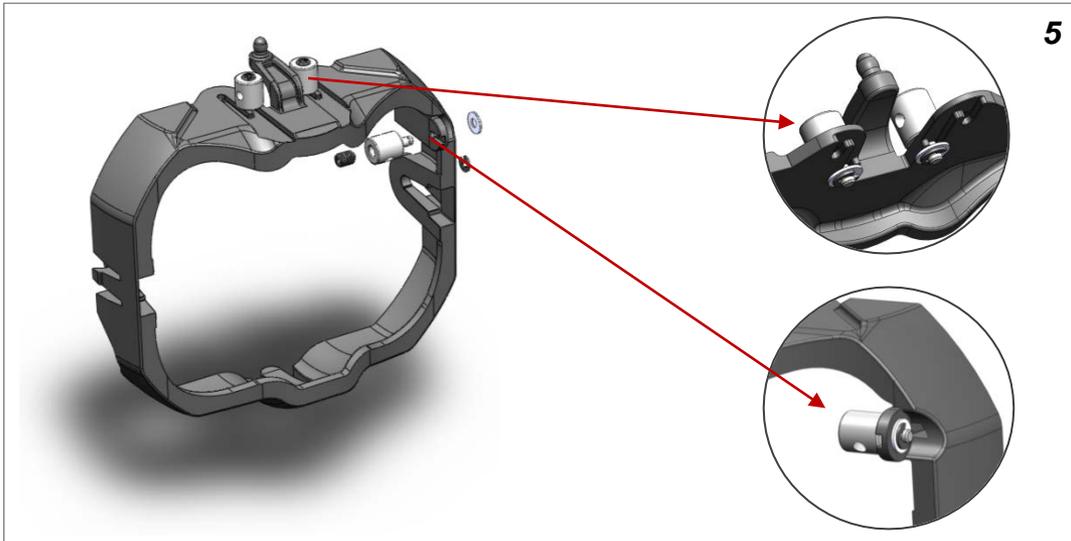


Push the servo in place until the 2 snap fits lock into place

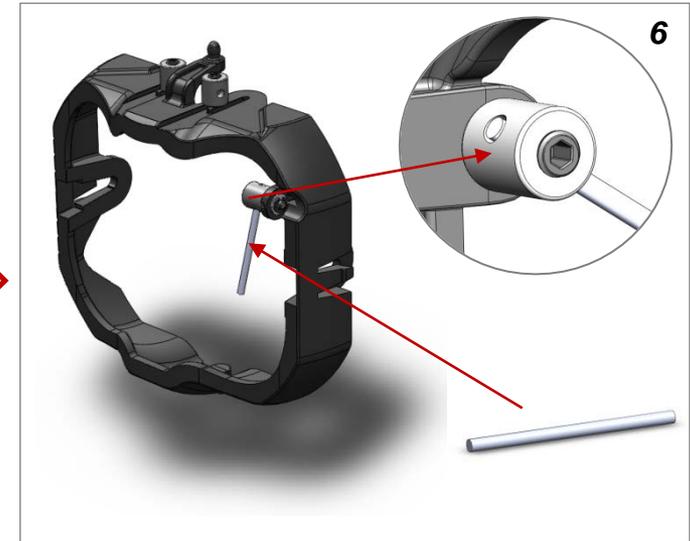


Assemble link stopper on servo horn and secure with circlip  
Push horn on servo and secure with screw as shown (servo shall be centred)

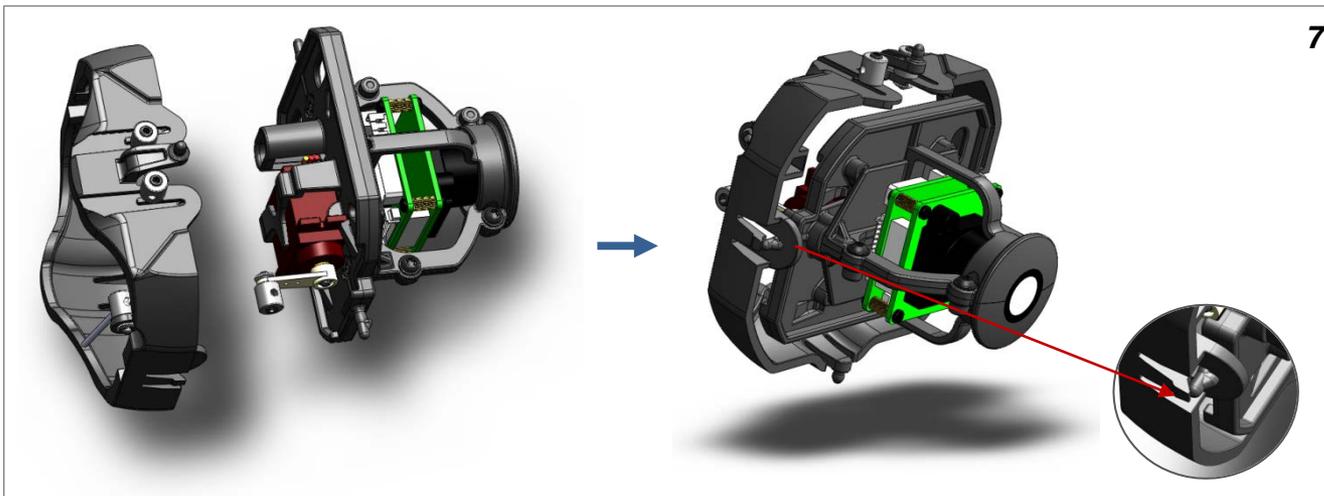
# RV P&T – Micro Camera Pan&Tilt - Assembly



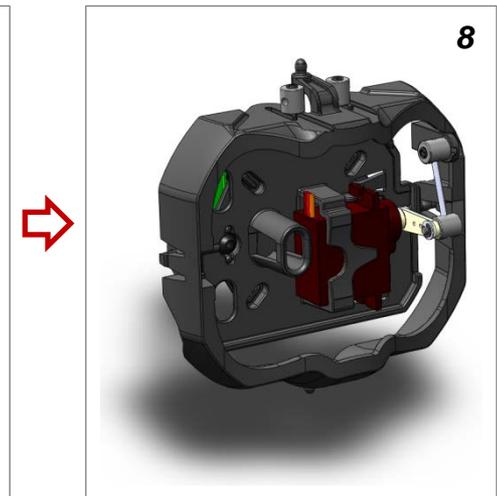
Assemble 3 link stoppers to gimbal ring and secure with circlip according to picture (please note which holes are used)



Assemble 26mm push rod (flush with link stopper body)

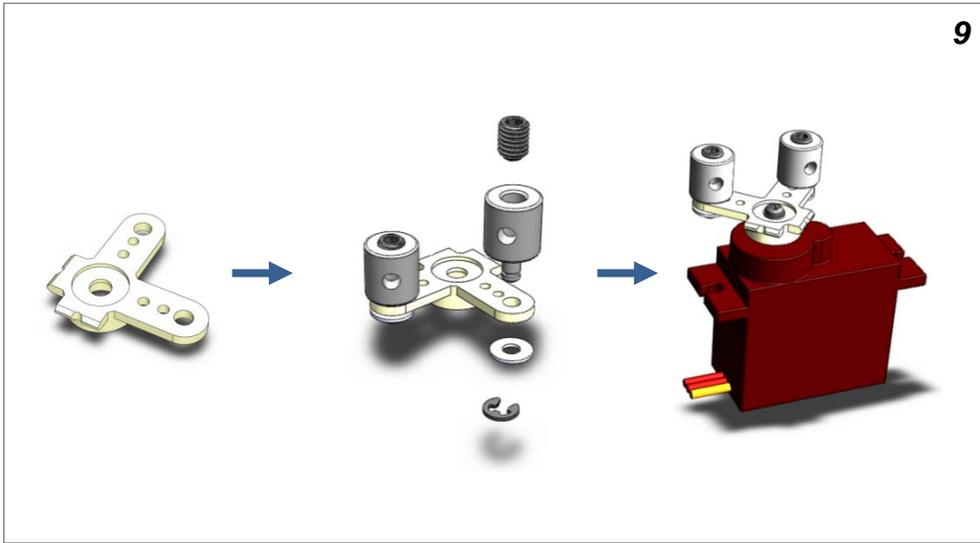


Snap camera assembly into ring. Do not to over-stress the snap features. Once into place it's very difficult to disassemble!

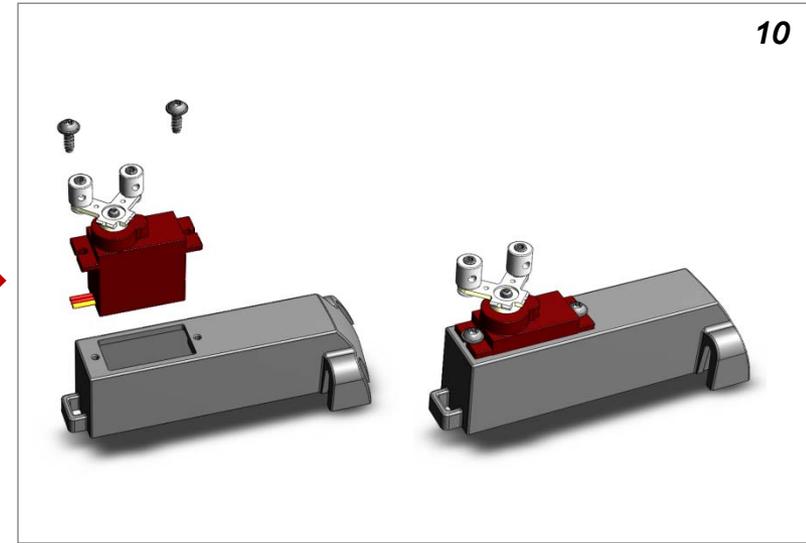


Connect push rod and tighten screws

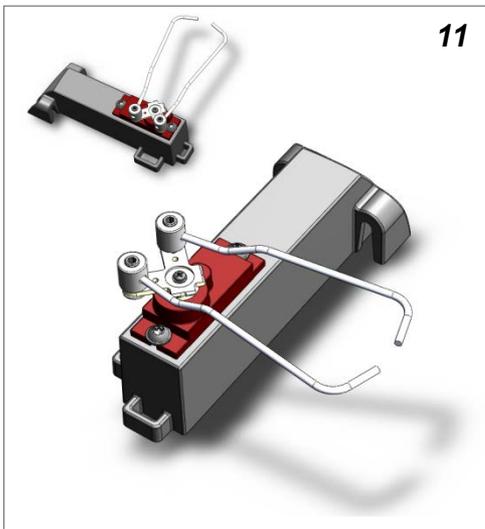
# RV P&T – Micro Camera Pan&Tilt - Assembly



Assemble link stoppers to V-shaped servo horn secure with circlips (servo shall be centred)



Insert servo into holder and secure with 2 screws (careful with cable)

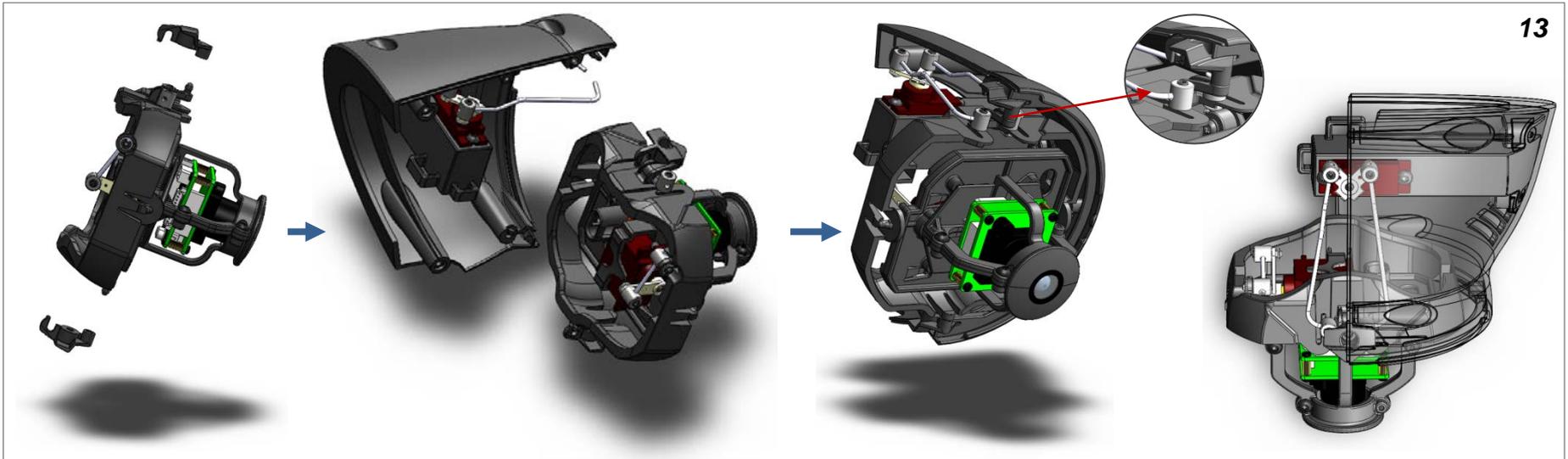


Mount 2 push rods according to picture

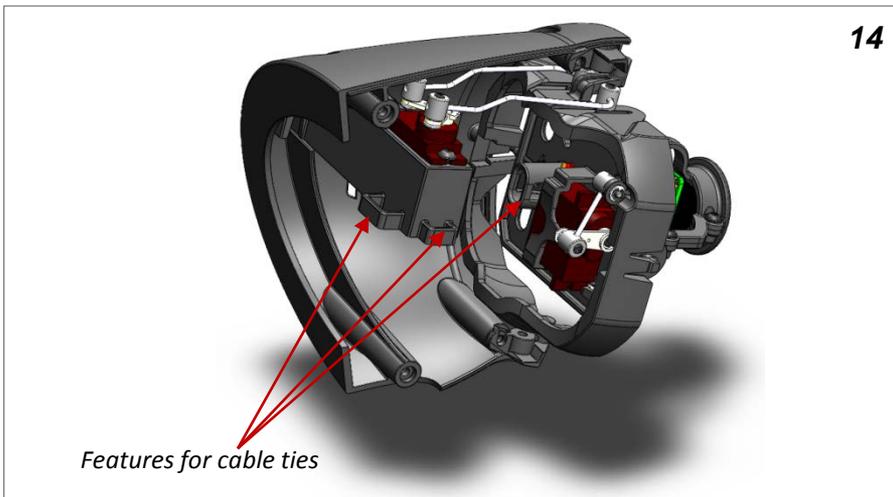


Insert servo assembly into left main housing and secure with 2 screws

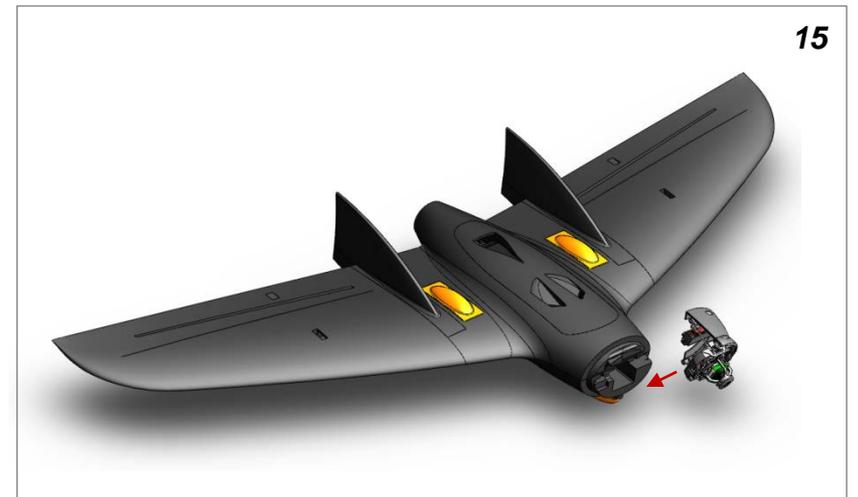
# RV P&T – Micro Camera Pan&Tilt - Assembly



Attach the 2 pivot clips to the gimbal ring and insert into left housing. Insert the push rods into the link stoppers and tighten screws. Make sure everything turns smoothly.

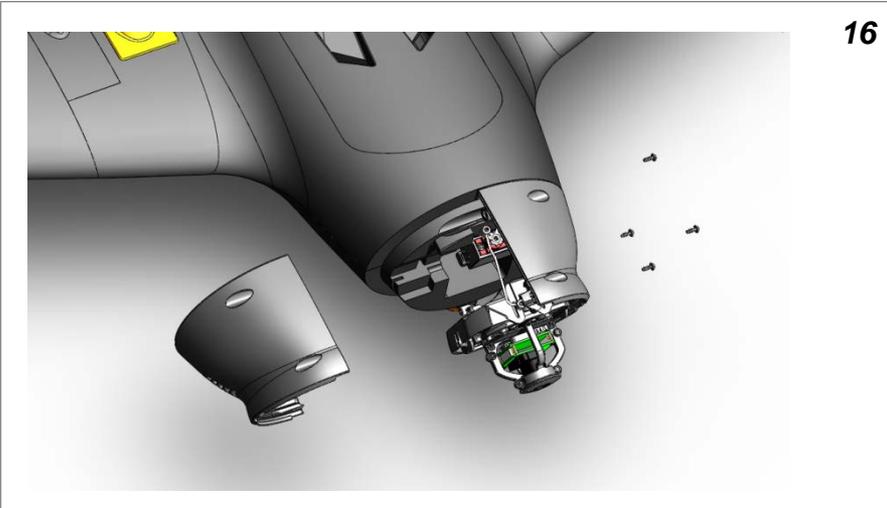


Route the servo and video cables and fix them with small cable ties to the provided features (make sure you allow enough slack for movement!).

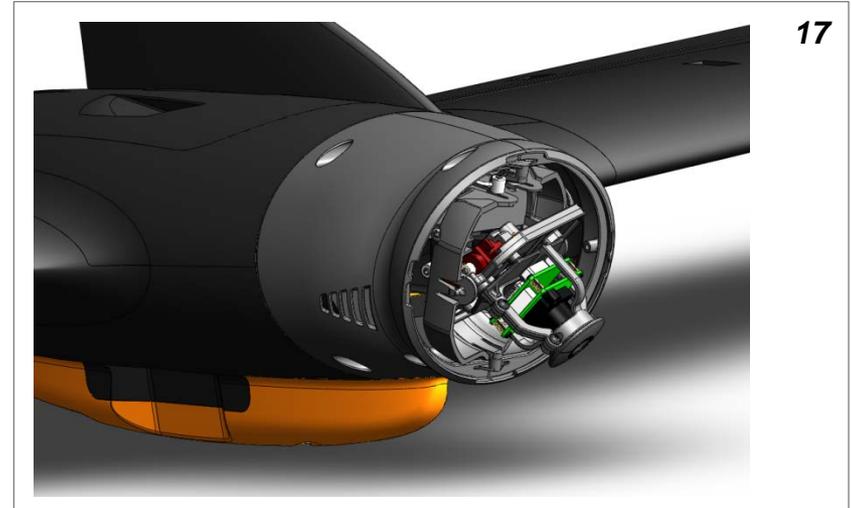


Slide the complete assembly carefully onto the RV-JET fuselage.

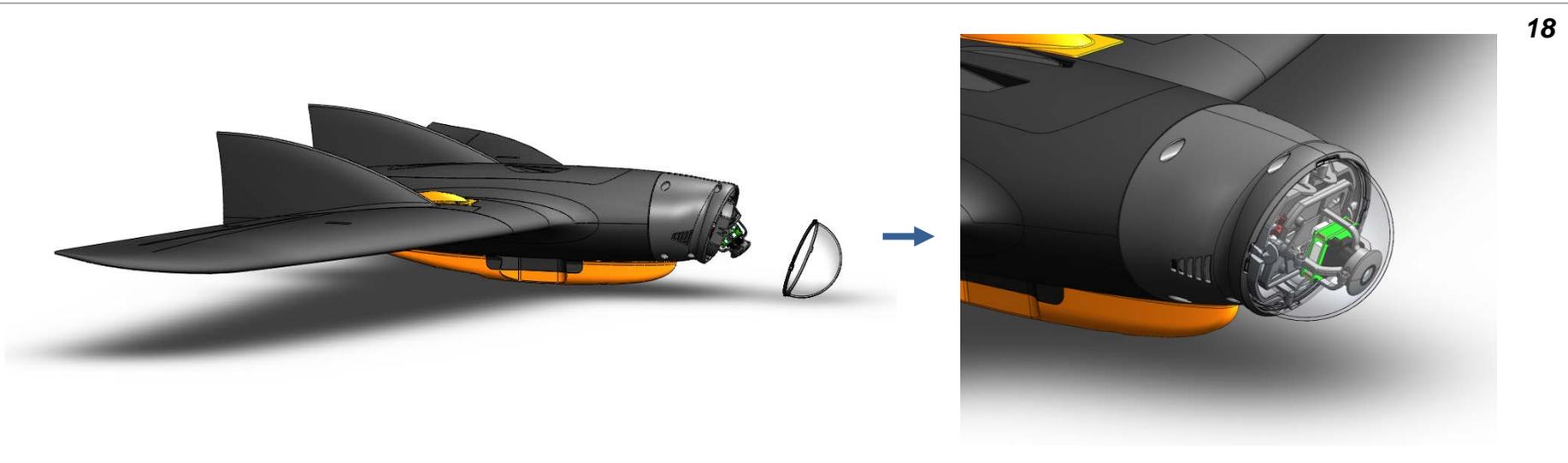
# RV P&T – GoPro Pan&Tilt - Assembly



Re-check the cables assemble the right housing half. Secure with 4 screws



Almost there....

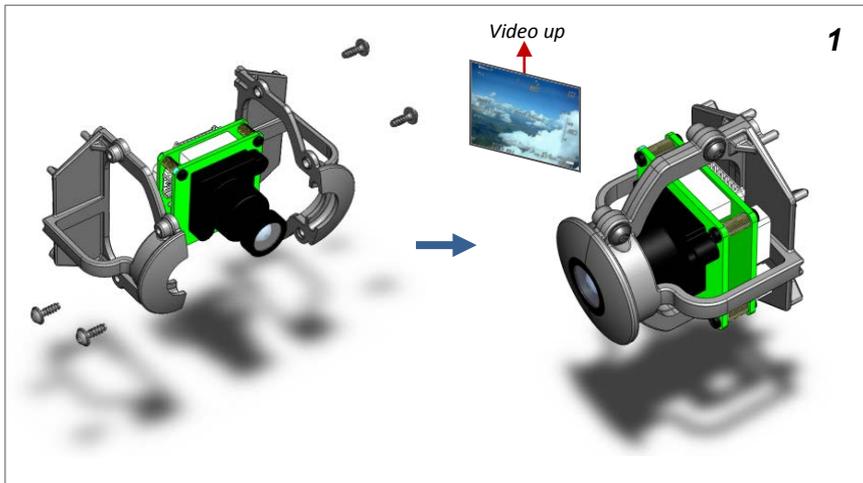


Finally attach the dome and rotate clockwise until it securely snaps into place. Congratulations, you have successfully assembled your RV-MiniCam Pan & Tilt!

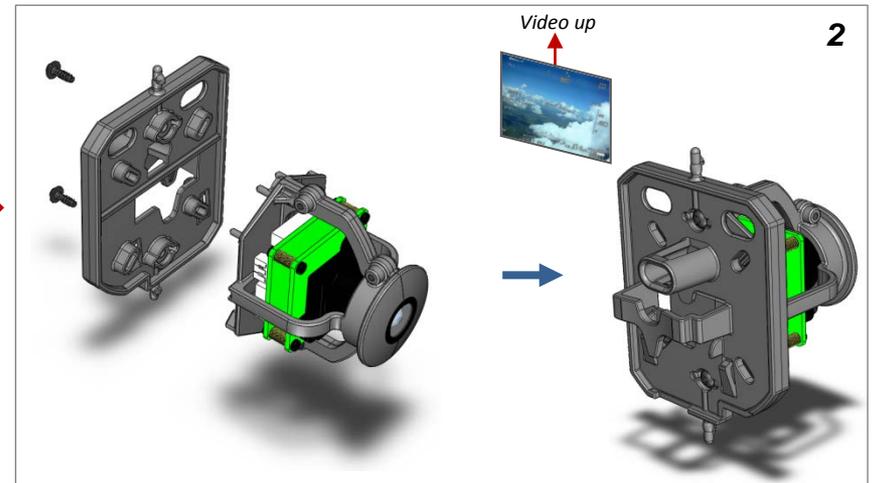
## *Assembly Instructions for the RangeVideo MicroCam Tilt&Pan Module*



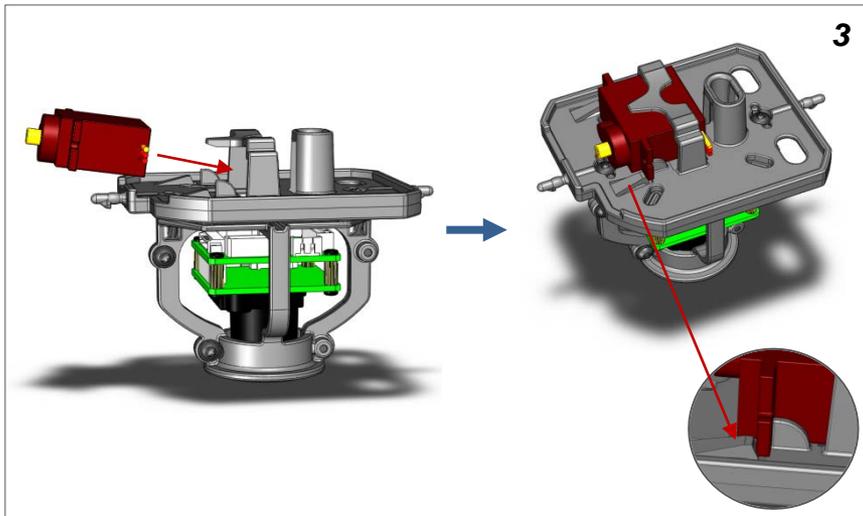
# RV P&T – Micro Camera Tilt&Pan - Assembly



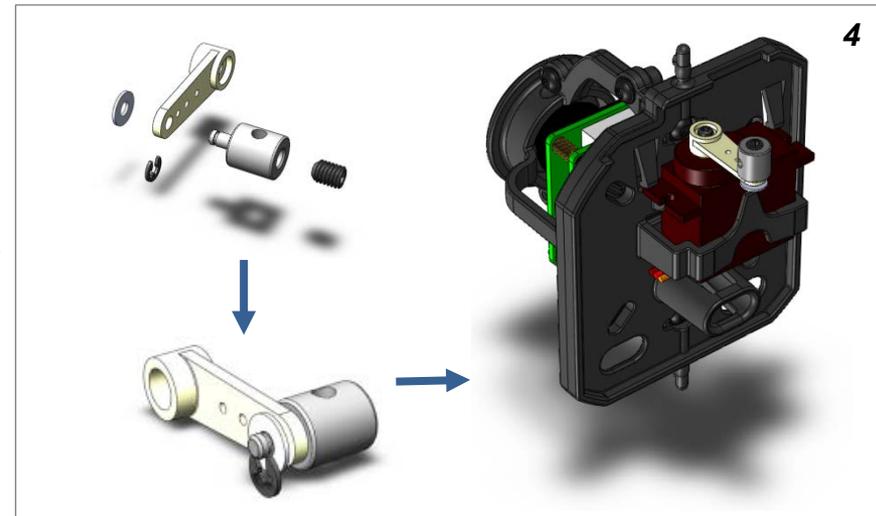
Mount your micro camera between the brackets and tighten the 4 screws (make sure the video orientation is correct!)



Push assembled camera bracket onto base plate and insert 2 screws (Note the video orientation!)

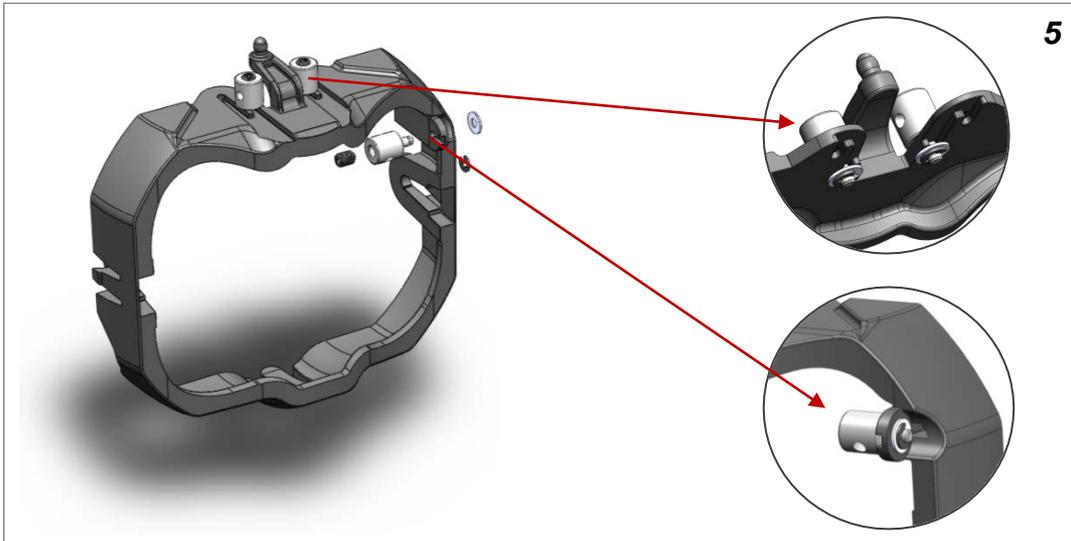


Push the servo in place until the 2 snap fits lock into place

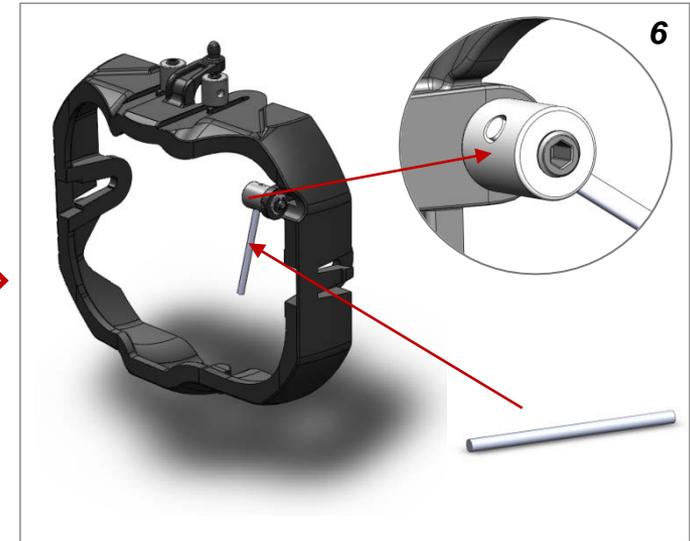


Assemble link stopper on servo horn and secure with circlip  
Push horn on servo and secure with screw as shown (servo shall be centred)

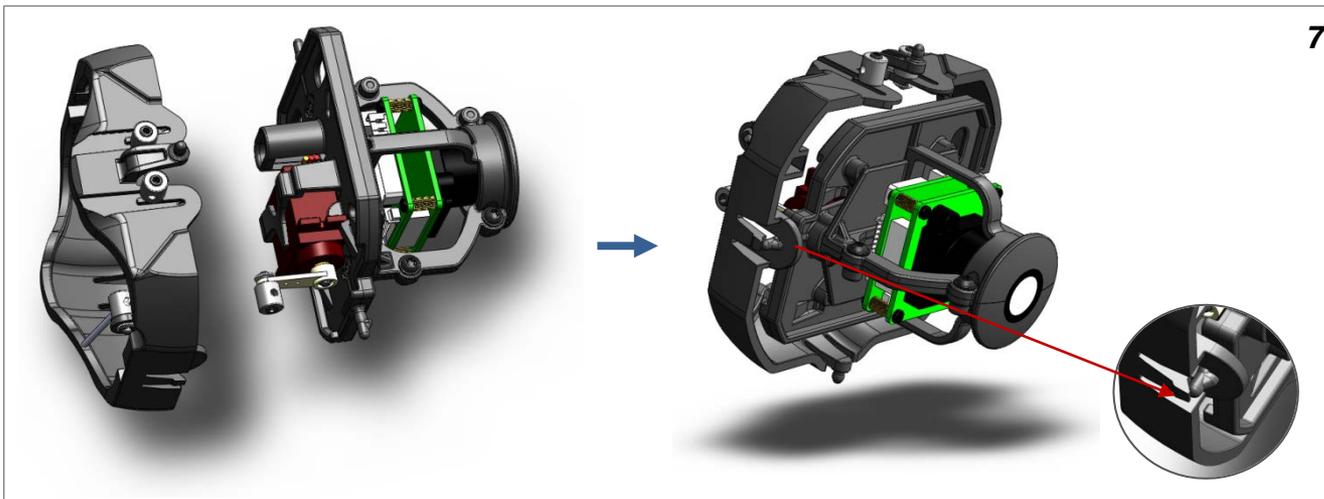
# RV P&T – Micro Camera Tilt&Pan - Assembly



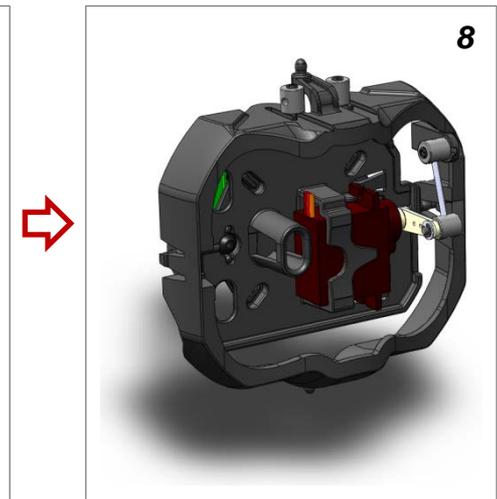
Assemble 3 link stoppers to gimbal ring and secure with circlip according to picture (please note which holes are used)



Assemble 26mm push rod (flush with link stopper body)

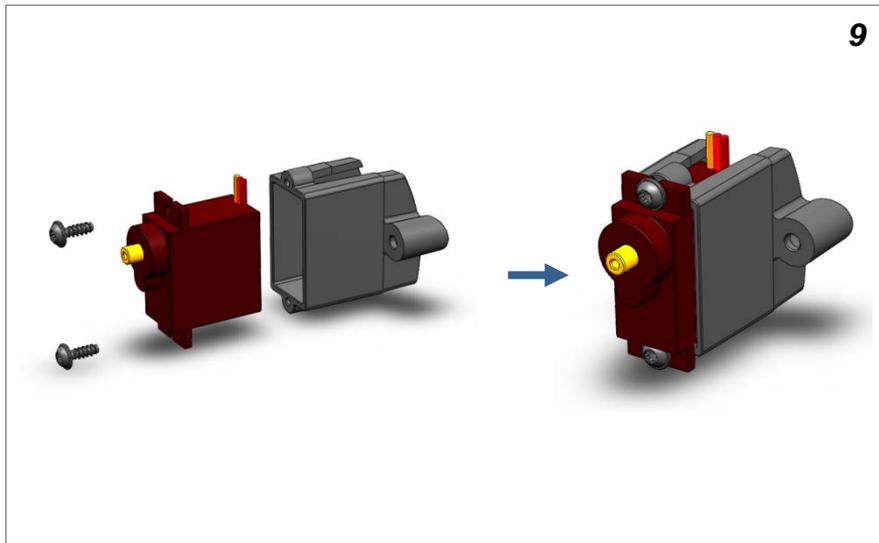


Snap camera assembly into ring. Do not to over-stress the snap features. Once into place it's very difficult to disassemble!

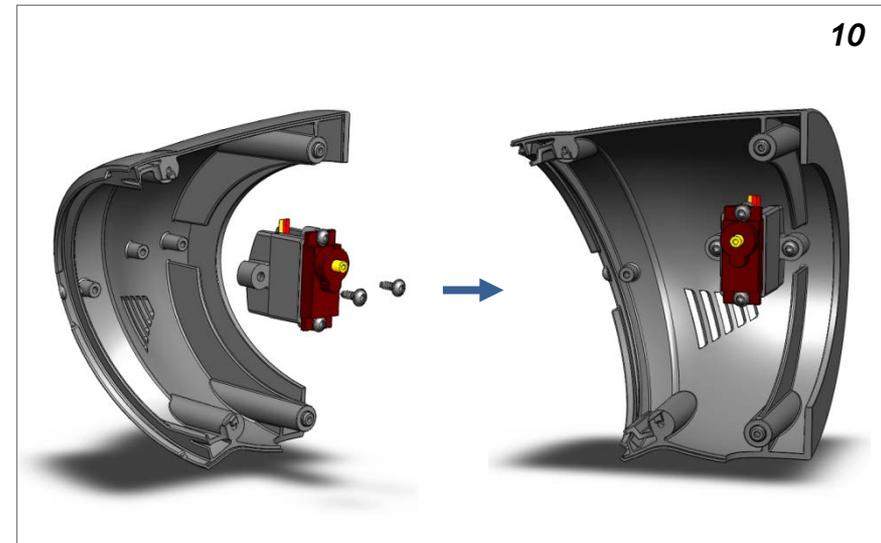


Connect push rod and tighten screws

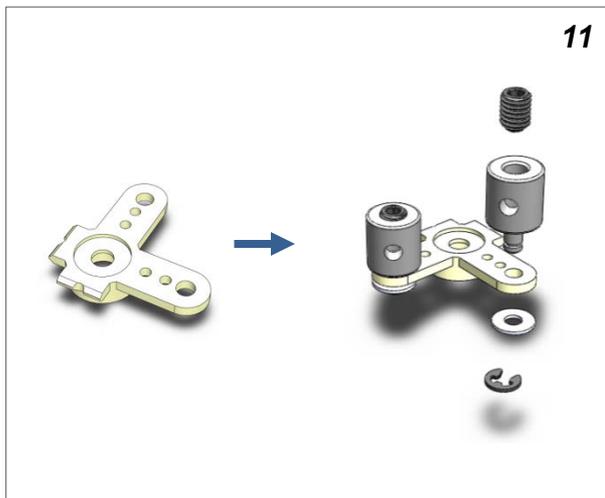
# RV P&T – Micro Camera Tilt&Pan - Assembly



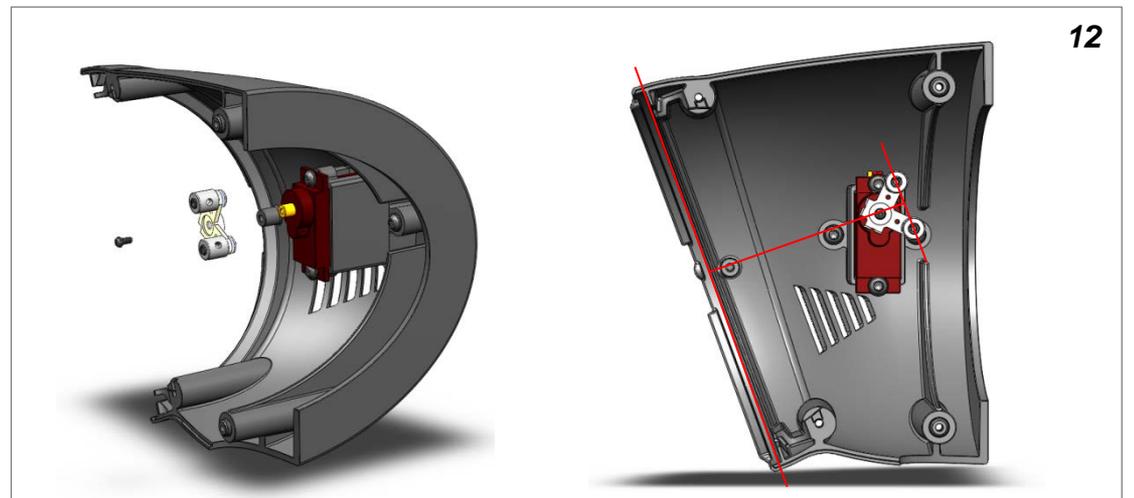
Insert servo into holder and secure with screws (careful with cable)



Insert servo holder and secure with 2 screws (careful with cable)

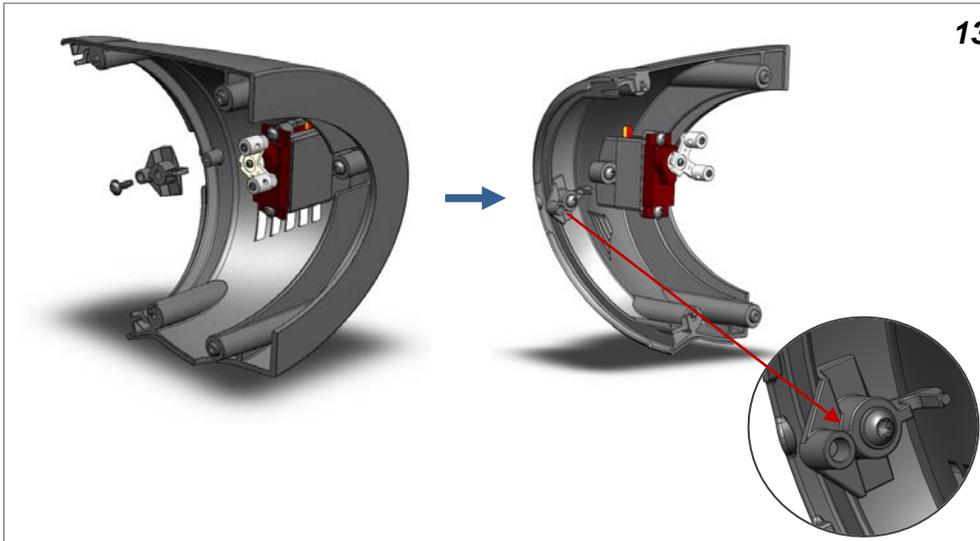


Assemble link stoppers to V-shaped servo horn  
secure with circlips

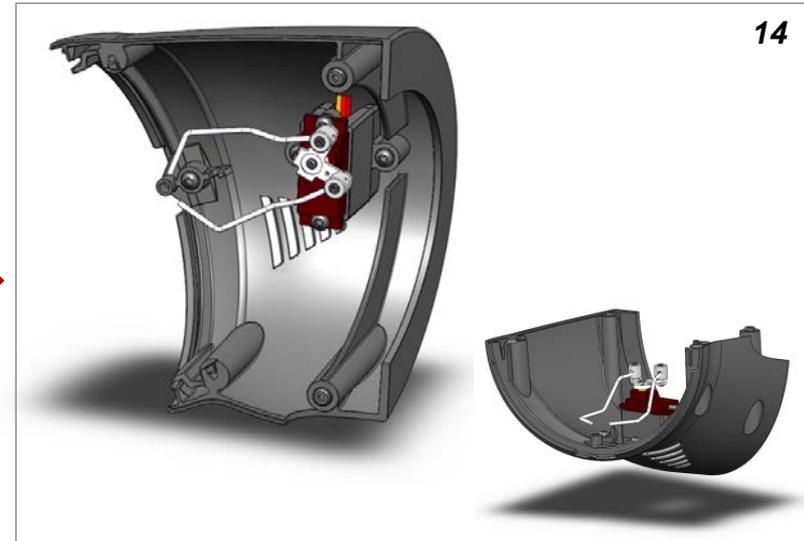


Align horn according to picture (parallel with front edge) and push onto servo. Secure with screw.  
The servo should be centred prior to this step

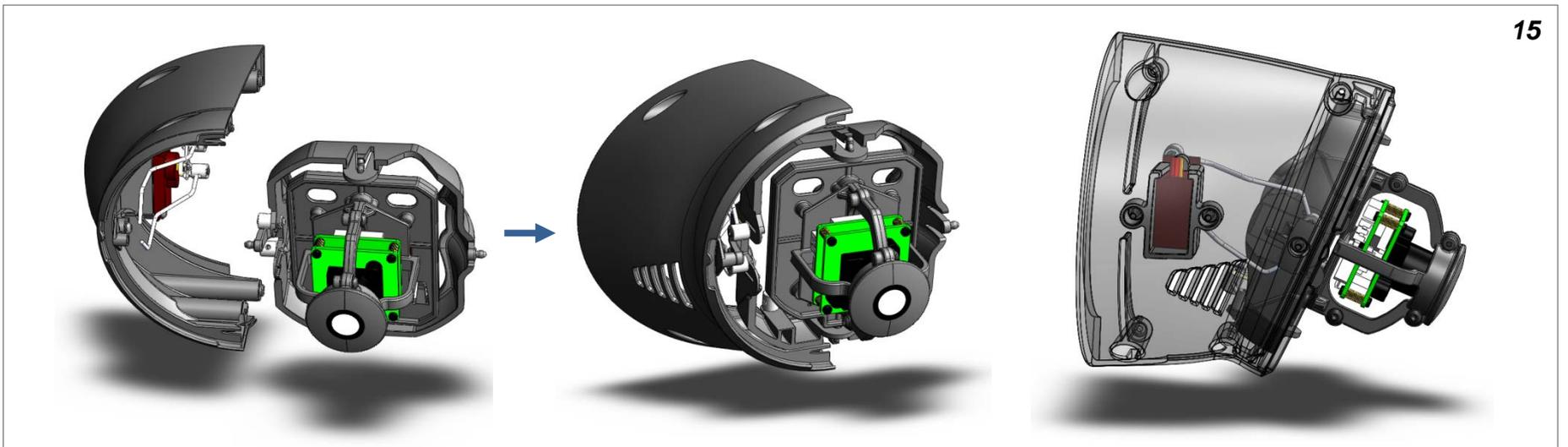
# RV P&T – Micro Camera Tilt&Pan - Assembly



Mount pivot clip to right housing and secure with screw

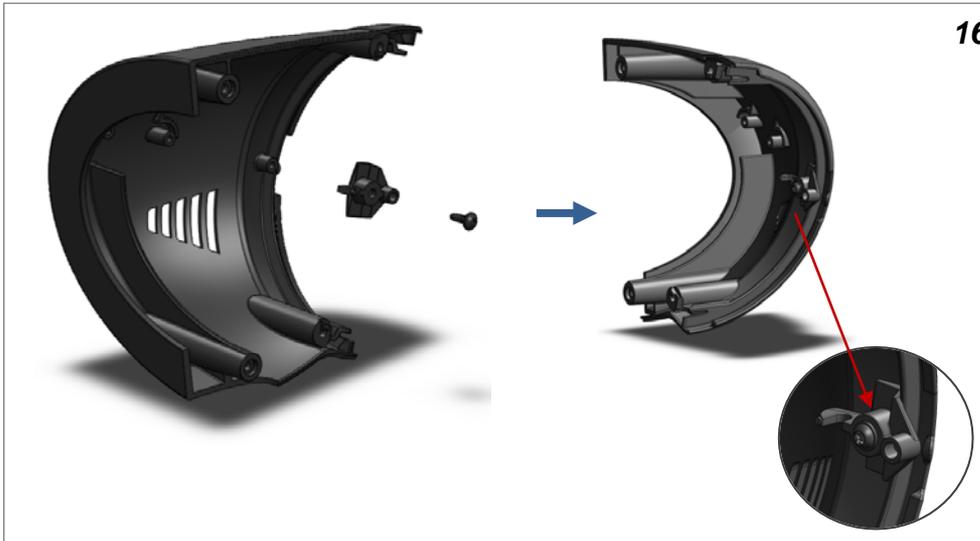


Mount 2 push rods according to pictures

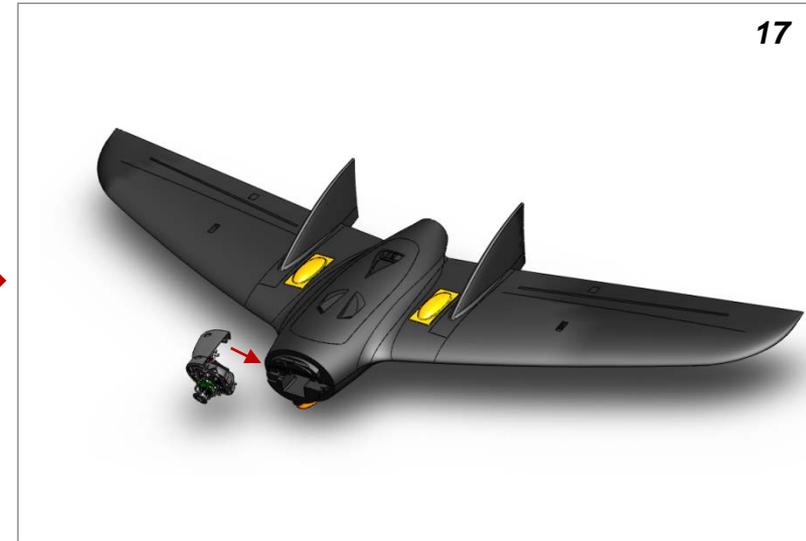


Insert the gimbal assembly into Right housing. Insert the push rods into the link stoppers and tighten screws. Make sure everything turns smoothly.

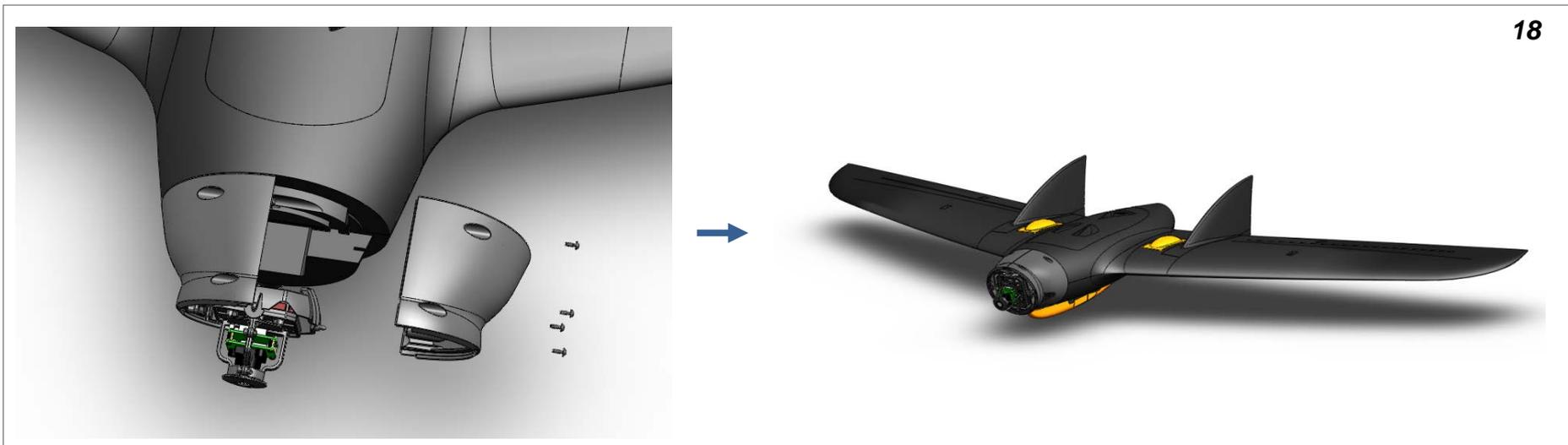
# RV P&T – Micro Camera Tilt&Pan - Assembly



*Mount pivot clip to left housing and secure with screw*



*Slide the complete assembly carefully onto the RV-JET fuselage.*



*Check the cables assemble the right housing half. Secure with 4 screws*



*Finally attach the dome and rotate clockwise until it securely snaps into place. Congratulations, you have successfully assembled your RV-MiniCam Tilt & Pan!*

