Assembly manual / Manual de montaje

1. Check package contents.
Revisar contenido del paquete.

Black/negro x34.
Grey/gris x2
Ref.A

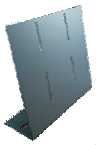
Grey/gris M3x6mm x26.
Black/negro M3x6mm x25.
Ref.B

Grey/gris M3x3mm x0.
Ref.C

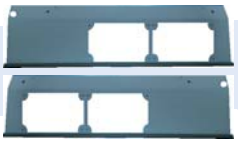
Grey/gris x52.
Black/negro x8
Ref.D

Black/negro x6.
Ref.E

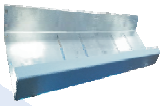
x6.
Ref.F



x3. Screen support, grey.
Soporte pantalla, gris.
Ref.G



Illumination panel, grey.
Panel iluminación, gris.
x1, Left/Izquierdo Ref.H
x1, Right/Derecho Ref.I



Central U beam, grey.
Viga central, gris.
x1, Left/Izquierda Ref.1
x1, Central Ref. 2
x1, Right/Derecha Ref. 3

x1. Captain´s side left rib, grey.
Costilla izquierda, lado capitán, gris.
Ref.J

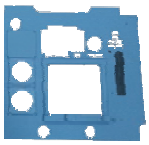
x1. FO´s side right rib, grey.
Costilla derecha lado FO, gris.
Ref.K

x1. Captain´s side right rib, grey.
Costilla derecha lado capitán, gris.
Ref.L

x2. FO´s side and Central panel left ribs, grey.
Costillas izquierdas lado FO y panel central, gris.
Ref.M, N

x1. Central panel right rib*, grey.
Costilla derecha* panel central, gris.
Ref.O

x1. Captain´s side front panel, grey.
Panel frontal lado capitán, gris.
Ref.P



x1. Central front panel, grey.
Panel frontal central, gris.
Ref.Q

x1. FO´s side front panel, grey.
Panel frontal lado FO, gris.
Ref.R

x1. Front cover CDU box, grey.
Tapadera frontal caja CDU, gris.
Ref.S

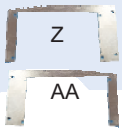
x1. CDU left box cover, grey.
Tapadera izquierda caja CDU, gris.
Ref.T

x1. CDU right box cover, grey.
Tapadera derecha caja CDU, gris.
Ref.U

x1. CDU upper box cover, grey.
Tapadera superior caja CDU, gris.
Ref.V

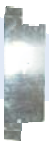
x2. Side covers, grey.
Cierres laterales, gris.
Ref.W, X

x1. MCP&EFIS support, black.
Soporte de MCP y EFIS, negro.
Ref.Y



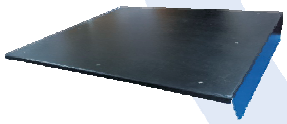
x2. EFIS&MCP part of junction, grey.
Piezas de unión EFIS y MCP, gris.
Left/Izquierda Ref.Z
Right/Derecha Ref. AA

x1. structural reinforcement bar, black.
Barra de refuerzo estructural, negra.
Ref.AB

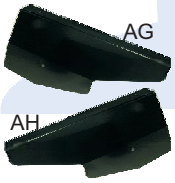


x1. structural reinforcement plate, black.
Placa de refuerzo estructural, negra.
Ref.AC

3 White meta-crylate parts.
3 Piezas de metacrilato blanco.
Ref.AD



x2. Right & left upper glare shield covers, black.
Tapaderas superiores del glare shield derecha e izquierda, negro.
Left/Izquierda Ref. AE
Right/Derecha Ref. AF



x2. Right & left glare shield corner covers, black.
Esquineras derecha e izquierda del glare shield, negro.
Left/Izquierda Ref. AG
Right/Derecha Ref. AH

x1. Upper glare shield central cover, black.
Tapadera superior central del glare shield, negro.
Ref. AI

AJ

AK

x2. Front glare shield covers (annunciators and sixpack), mat black.
Tapaderas frontales glareshield (anunciadores y sixpack), negro mate.
Left/Izquierda Ref.AJ
Right/Derecha Ref.AK

AL

AM

x2. Lower glare shield covers, black.
Tapaderas inferiores del glare shield, negro.
Left/Izquierda Ref. AL
Right/Derecha Ref. AM

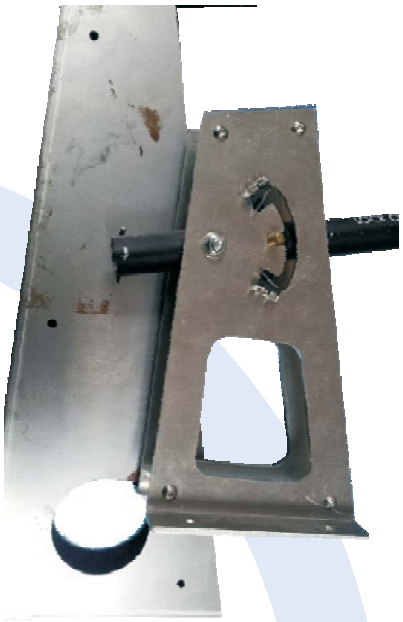
x1. Horizont cover, grey.
Tapadera horizonte, gris.
Ref. AN

x2. Altimeter+Compass covers, grey.
Tapaderas Altimetro+Brújula, gris.
Ref. AO

2.Recommendations for assembly.
Is recommendable to have all tools required at starting the assembly. If you don´t have all gauges, panels or modules of the MIP it should be good to do some covers or dummie panels, NONE OF THE GAUGES, PANELS OR MODULES ARE INCLUDED. Is very recommendable to assemble the OC Chrono module, OC Yaw damper gauge and OC Gear lever gauge on the front panel before assemble the structure parts. For annunciators and sixpack too.
Recomendaciones para el montaje.
Es recomendable tener preparadas todas las herramientas necesarias para el montaje antes de empezar. Si no tienen todas las gauges, paneles o módulos del MIP sería bueno hacer tapas o paneles de cierre simulados, NINGUNO DE LOS PANELES, GAUGES O MÓDULOS ESTÁN INCLUIDOS. Es muy recomendable montar el Reloj, el Yaw damper y la palanca del tren de Opencockpits en el panel frontal antes de montar la estructura. Los indicadores y el Sixpack también.

2.1.- Assemble gear lever, remove marked screws.
Montar el tren de aterrizaje, quitar los tornillos marcados:

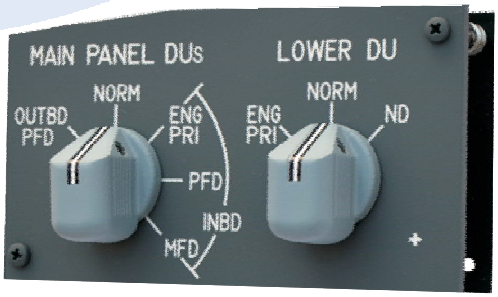
2.2.- Fix the lever to the rib Ref.O.
Fijar la palanca a la costilla Ref.O.



3.- Assemble chronos to front panels Ref.P&R from back to front. If the chrono is not available jump to 4. Use M3x16mm screws and nuts grey painted (not included).
Fijar los chronos a los paneles frontales Ref.P y R desde atrás hacia adelante. Si el chrono no está disponible saltar al punto 4. Usar tornillos de M3x16mm y tuercas pintadas de gris (no incluidos).

4.- Assemble nose wheel panel to front panel Ref.P from front. If the nose wheel panel is not available jump to 5. Use M3x16mm screws and nuts grey painted (not included).
Fijar el panel nose wheel al panel frontal Ref.P desde delante. Si el panel nose wheel no está disponible saltar al punto 5.
Usar tornillos de M3x16mm y tuercas pintados de gris (no incluidos).

5.- Assemble DUs IDC to front panels Ref.P&R.
To assemble the DU is necessary to extract the buttons. DU front panels are screwed to separators with washers in the middle, when doing the MIP assembly these washers are not necessary, remove them. Put the front panel from front and the electronics from back panel, reassemble the DU and put the buttons.
Use M3x16mm screws and nuts grey painted (not included).
Montar los DU IDC en los paneles frontales Ref.P y R.
La carátula del panel DU IDC viene unida a unos separadores con unas arandelas enmedio, al montarlas en el MIP ya no son necesarias, deséchelas. Monte la carátula por delante y la electrónica por detrás y atornille los botones.
Usar tornillos de M3x16mm y tuercas pintados de gris (no incluidos).



6.- Assemble AFDS IDC to front panel Ref.P&R from back to front. If the AFDS is not available jump to 7. Use M3x16mm screws and nuts grey painted (not included).
Fijar los AFDS al panel frontal Ref.P y Q desde atrás hacia adelante. Si el AFDS no está disponible saltar al punto 7. Usar tornillos de M3x16mm y tuercas pintados de gris (no incluidos).

7.- Assemble Lights test panel to front panel Ref.P from front. If the lights test panel is not available jump to 8. Use M3x16mm screws and nuts grey painted (not included).
Fijar el panel de test de luces al panel frontal Ref.P desde delante. Si el panel no está disponible saltar al punto 8. Usar tornillos de M3x16mm y tuercas pintados de gris (no incluidos).

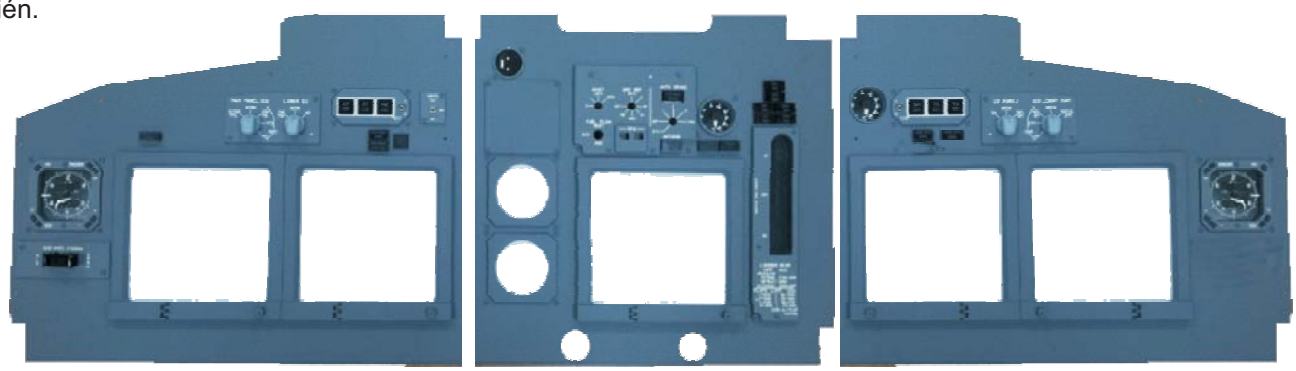
8.- Assemble Yaw damper gauge from back panel to front panel Ref.Q. If the gauge is not available jump to 9. Use M3x16mm screws and nuts grey painted (not included).
Fijar el gauge Yaw damper al panel frontal Ref.Q desde atrás hacia adelante. Si el gauge no está disponible saltar al punto 9. Usar tornillos de M3x16mm y tuercas pintados de gris (no incluidos).

9.- Assemble Flaps IDC panel from front panel Ref.Q. If the panel is not available jump to 10. Use M3x16mm screws and nuts grey painted (not included).
Fijar el panel Flaps IDC al panel frontal Ref.Q desde delante. Si el panel no está disponible saltar al punto 10. Usar tornillos de M3x16mm y tuercas pintados de gris (no incluidos).

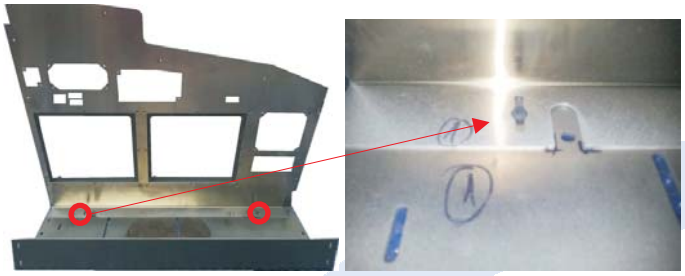
10.- Assemble Flaps gauge from back panel to front panel Ref.Q. If the gauge is not available jump to 11. Use M3x16mm screws and nuts grey painted (not included).
Fijar el gauge Flaps al panel frontal Ref.Q desde atrás hacia adelante. Si el gauge no está disponible saltar al punto 11. Usar tornillos de M3x16mm y tuercas pintados de gris (no incluidos).

11.- Assemble Landing gear IDC panel from front panel Ref.Q. If the panel is not available jump to 12. Use M3x16mm screws and nuts grey painted (not included).
Fijar el panel de Tren de aterrizaje IDC al panel frontal Ref.Q desde delante. Si el panel no está disponible saltar al punto 12. Usar tornillos de M3x16mm y tuercas pintados de gris (no incluidos).

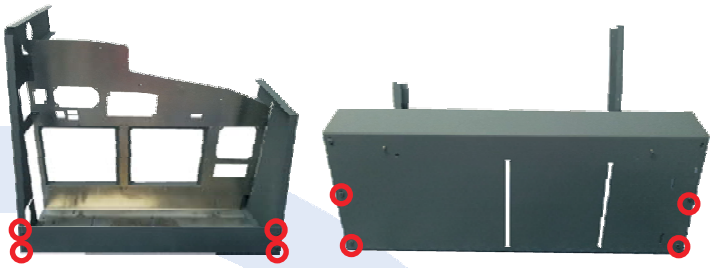
12.- Assemble all indicators available for MIP panel. All are standar OC indicators except Stab Out of Trim which is a korry. Grey cover Ref. AN can be screwed now with Ref. C grey screws and Ref. AO covers can be glued too.
Montar todos los indicadores disponibles del MIP. Todos son indicadores estándar de OC excepto el Stab Out of Trim que es un korry. La tapadera Ref. AN se puede atornillar con tornillos grises Ref. C y las tapas Ref. AO pueden pegarse también.



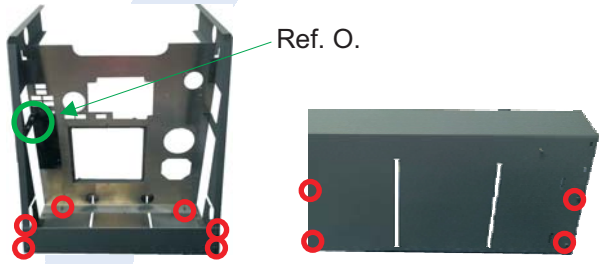
13.- Assemble front panel Ref.P with U beam Ref. 1 using grey screws Ref.D.
Unir el panel frontal Ref.P usando con la viga Ref. 1 usando tornillos grises Ref.D.



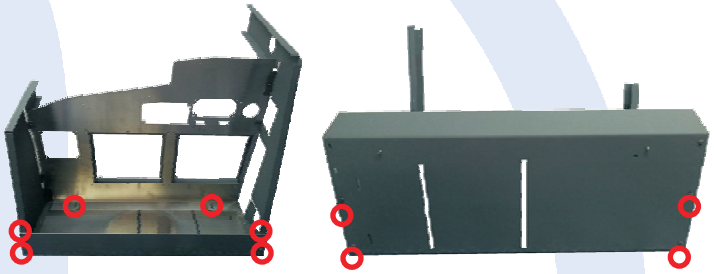
14.- Assemble ribs Ref. J and L on U beam Ref. 1 with grey screws Ref. D.
Montar las costillas Ref. J y L en la viga Ref. 1 con tornillos grises Ref. D.



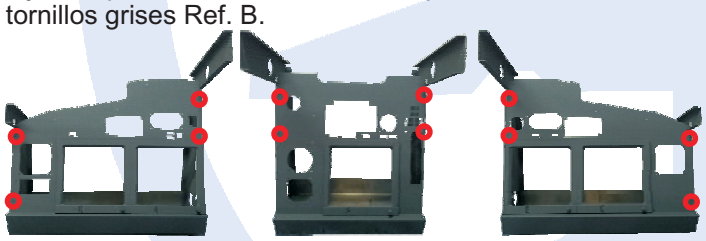
15.- Assemble U beam Ref. 2 with ribs Ref. M and O with grey screws Ref. D.
Montar la viga central Ref. 2 con las costillas Ref. M y O tornillos grises Ref. D.



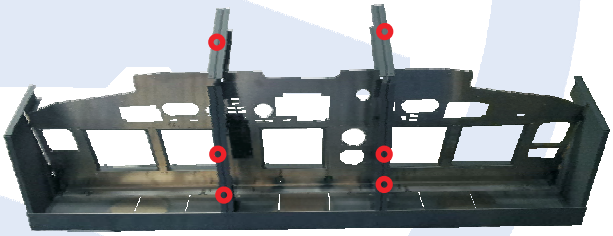
16.- Assemble U beam Ref. 3 with ribs Ref. K and N with grey screws Ref. D.
Montar la viga central Ref. 3 con las costillas Ref. K y N tornillos grises Ref. D.



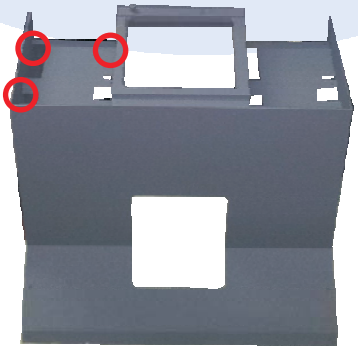
17.-Fix front panels to their respective ribs with grey screws Ref. B.
Fijar los paneles frontales a sus respectivas costillas con tornillos grises Ref. B.



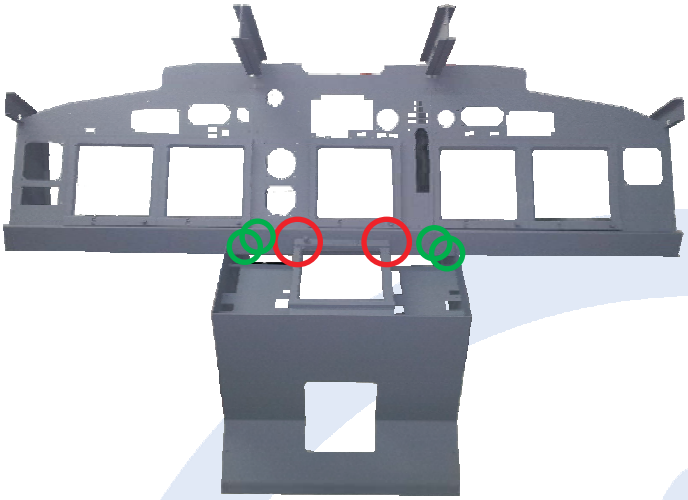
18.-Join all three parts using grey screws Ref. D and nuts Ref. F.
Unir las tres partes usando tornillos Ref. D y tuercas Ref. F.



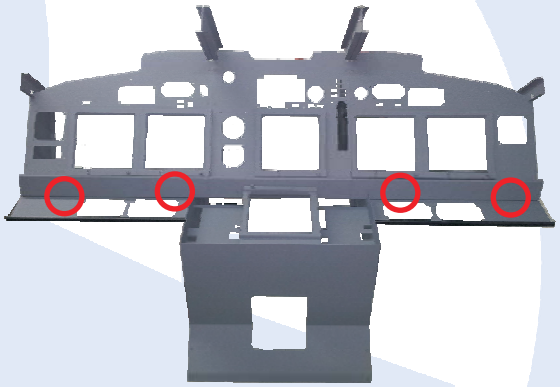
19.- Take parts Ref. S, T, U and V. Assemble the CDUs to part Ref.V (M4 screws and nuts not included) and assemble the complete bay using grey screws Ref. B.
Coger las piezas Ref. S, T, U y V. Montar las CDUs a la pieza Ref. V (Tornillos y tuercas M4 no incluidos) y montar la caja completa usando tornillos grises Ref. B.



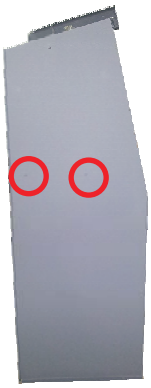
20.- Put the upper MIP structure finished on step 18 on the CDU bay and fix both structures with grey screws Ref.D.
Montar la estructura superior del MIP terminada en el paso 18 sobre la caja de la CDU y fijar con tornillos grises Ref.D.



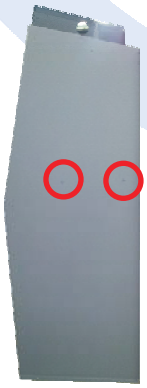
21.- Assemble illumination panels Ref. H and I in their respectives U beams Ref. 1 and 3 with grey screws Ref. D
Montar los paneles de iluminación Ref. H e I en sus respectivas vigas Ref. 1 y 3 con tornillos grises Ref. D.



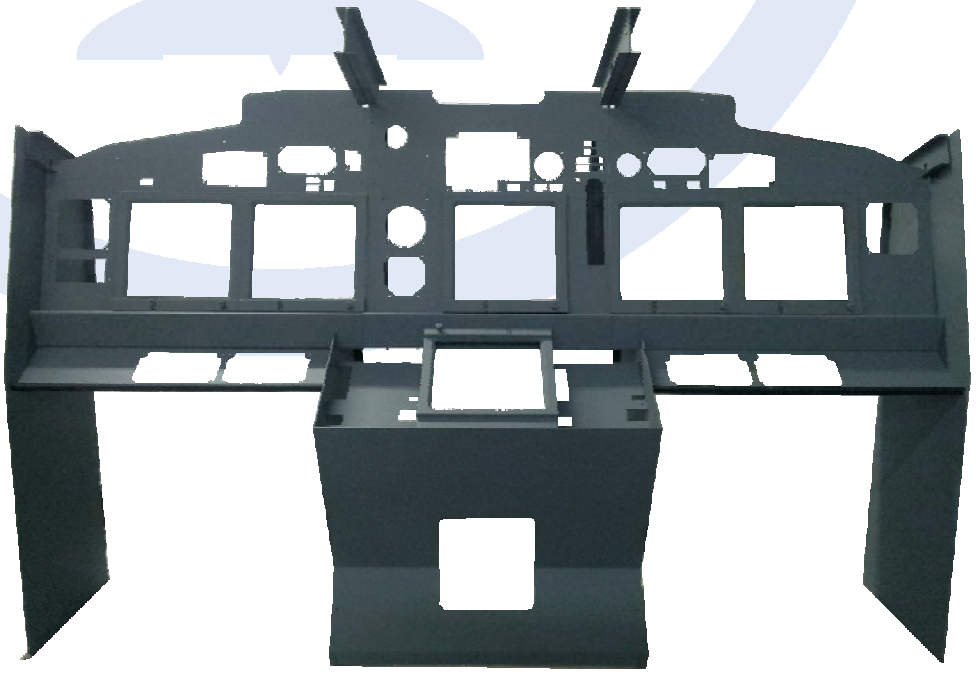
22.- Fix legs Ref. W and X with two grey screws Ref. D each to ribs Ref. J and K.
Fijar las patas Ref. W y X con dos tornillos grises Ref. D cada una a las costillas Ref. J y K.



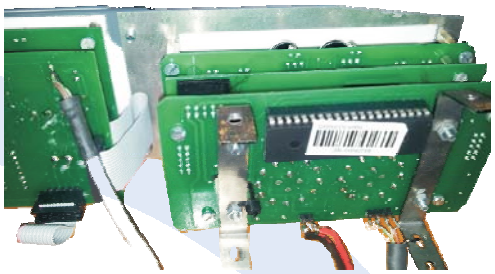
Ref. W

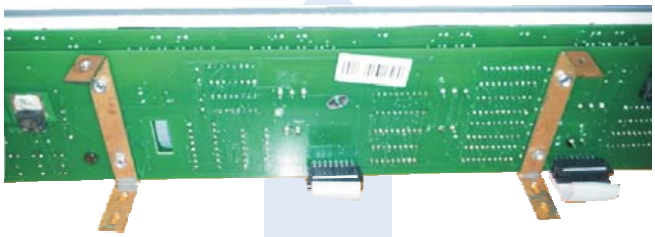


Ref. X



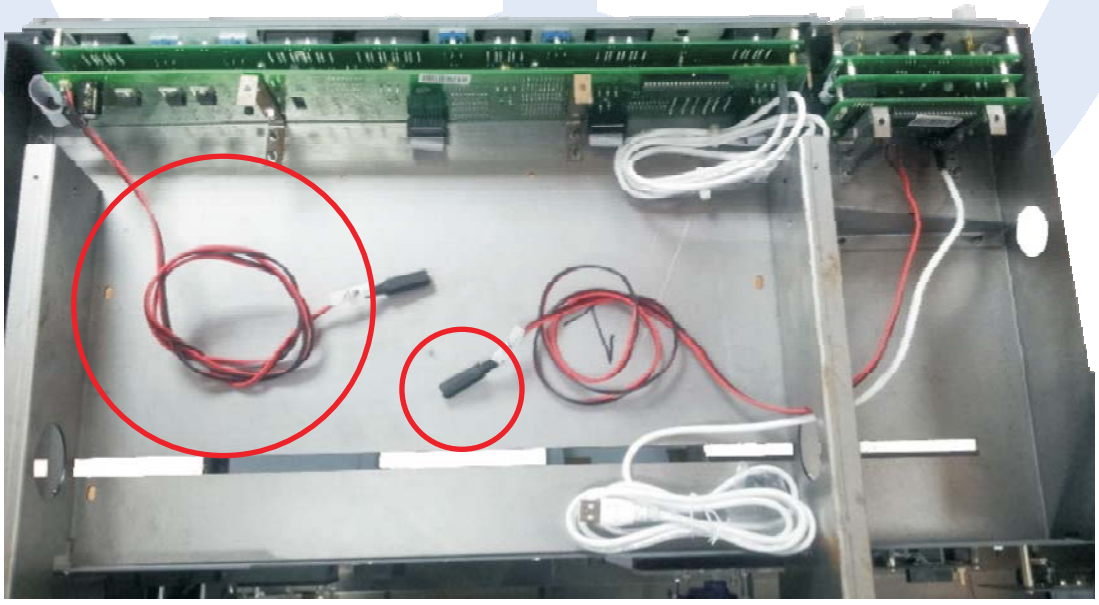
23.- Take the EFISs, a MCP and the parts Ref.Z and AA, disassemble the EFIS front panel (put attention with keys and buttons), insert part Ref. Z and AA behind the front panel and fix it, fix the MCP to the parts Ref. Z and AA with 2 screws M4 (Fasteners or other not included).
Coger los EFIS, un MCP y las piezas Ref.Z y AA, desmontar la carátula de los EFIS (tener cuidado con las teclas y botones), insertar las piezas Ref. Z y AA detrás de la carátula y cerrar, el MCP se fija a la pieza Ref. Z y AA con 2 tornillos M4 (Fasteners o de otro tipo no incluidos).



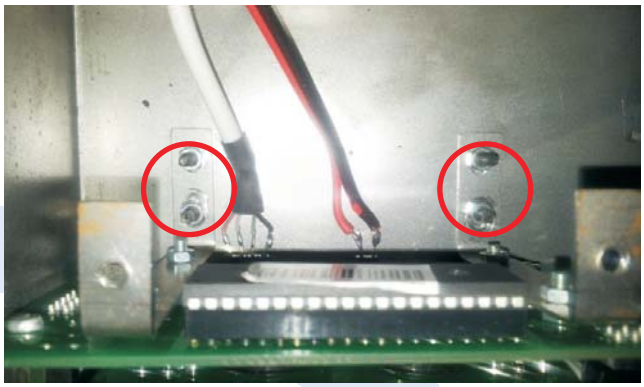
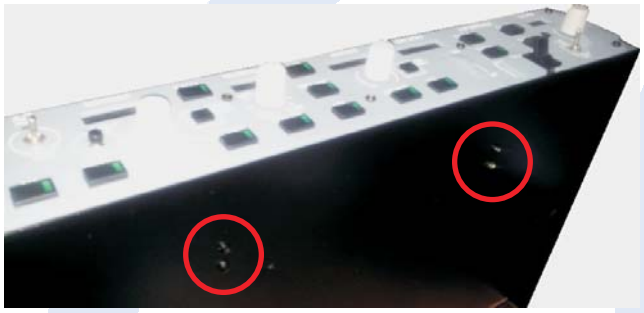
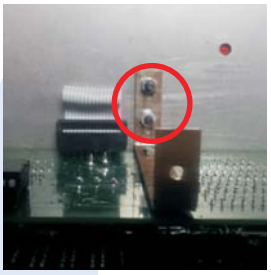
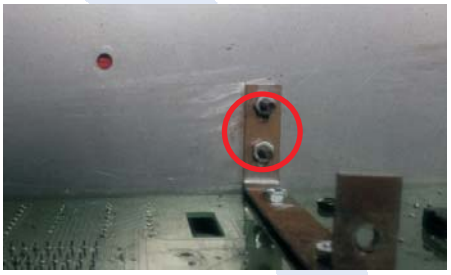


The OC EFIS and OC MCP with box has the fixing ribs, the OC MCP without box does not have the ribs. You have to do them.
El EFIS y MCP con caja de OC llevan incorporadas las escuadras de fijación, el MCP sin caja no las incluye, debe fabricarlas usted mismo.
*Other companies MCPs and EFIS modules can be assembled too.
*Se pueden montar MCPs y EFIS de otros fabricantes.

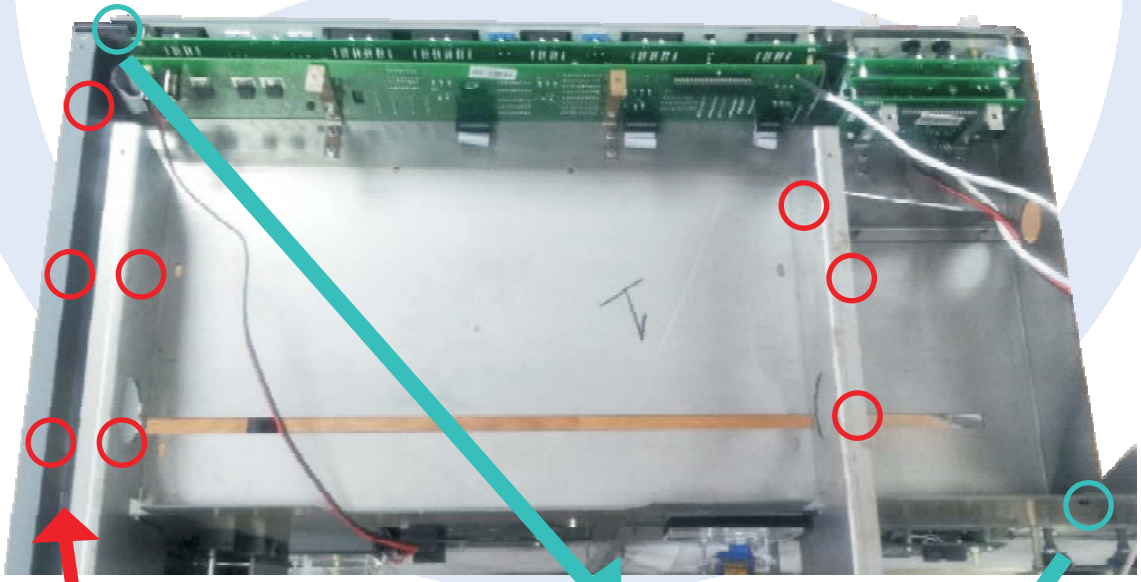
24.- Original power cables are too short to connect comfortably so it is advisable to make them longer and change the connector for other aerial type, not for box.
Los cables originales de alimentación son demasiado cortos para poder conectarlos con comodidad y es recomendable hacerlos más largos y cambiar los conectores por otros aéreos y no para caja.

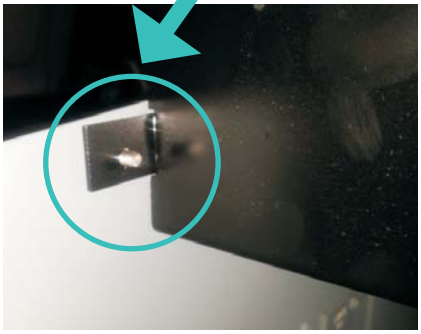


25.- Assemble the EFIS&MCP to part Ref. Y (screws and nuts not included).
Ensamblar los EFIS y el MCP con la pieza Ref. Y (tornillos y tuercas no incluidos).

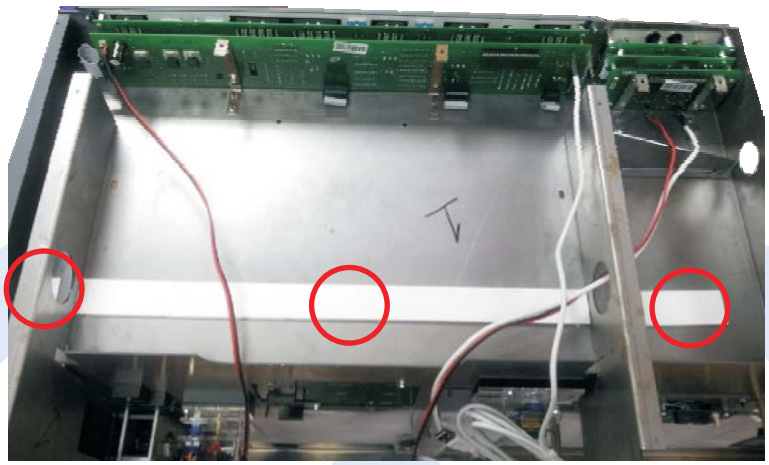





26.- Take EFIS & MCP assembly and assemble it to the MIP using Ref. D black screws and 2 M4 screws like DZUS (not included).
Coger el conjunto de EFIS y MCP y montarlo en el MIP usando tornillos negros Ref. D y 2 tornillos M4 como los DZUS (no incluidos).

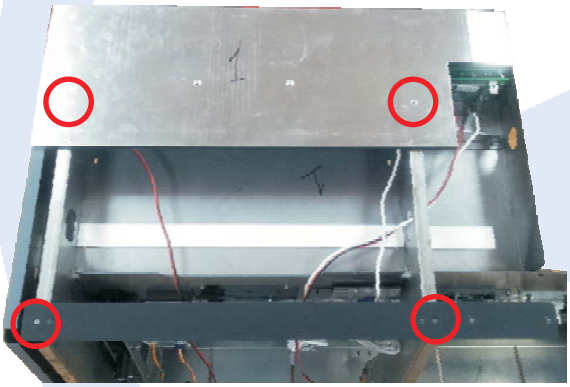


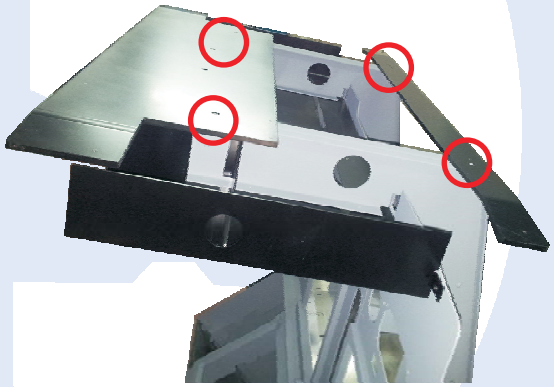


27.- At this point we can use methacrylate parts Ref. AD close the groove for illumination of instruments. The illumination can be done with leds strips (OC Ref.4TLS1).
En este momento podemos usar las piezas de metacrilato Ref. AD para cerrar la ranura de iluminación de instrumentos. La iluminación puede hacerse con tiras de leds (OC Ref.4TLS1).

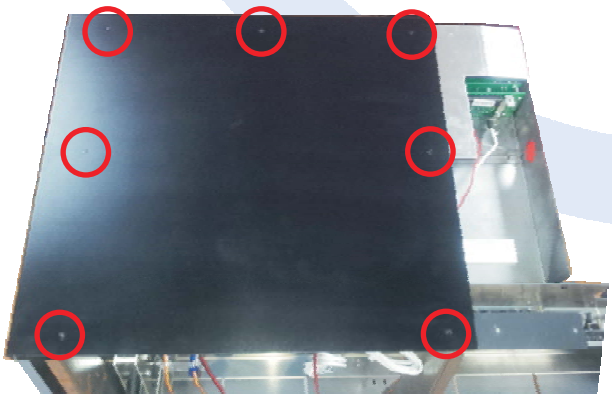


28.- Assemble parts Ref. AB and AC with grey screws Ref. B.
Montar las piezas Ref. AB y AC con tornillos grises Ref. B.



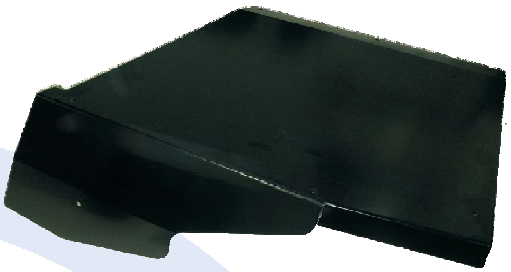


29.-Assemble cover Ref. AI with black screws Ref. B.
Montar la tapa Ref. AI con tornillos negros Ref. B.

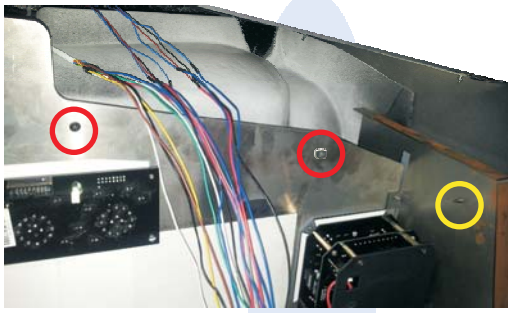
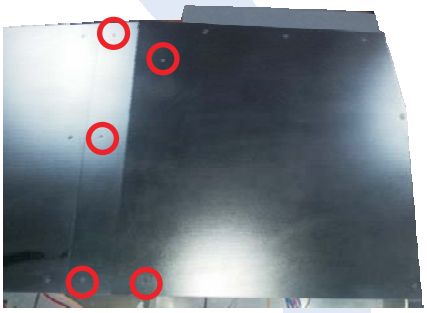


30.-Assemble Fire Warning, Master Caution and Sixpack indicators to parts Ref. AJ and AK. Remember to enlarge the cables.
Montar los indicadores de Fire Warning, Master Caution y Sixpack en las piezas Ref. AJ y AK. Recuerde alargar los cables.

31.- Assemble parts Ref. AJ and AK to their respective parts Ref. AL and AM and with parts Ref. AE and AF and fix them to parts Ref. AG and AH with black screws Ref.A.
Montar las piezas Ref. AJ y AK a sus respectivas piezas Ref. AL y AM y estas con las piezas Ref. AE y AF y fijarlo todo a las piezas Ref. AG y AH con tornillos negros Ref. A.

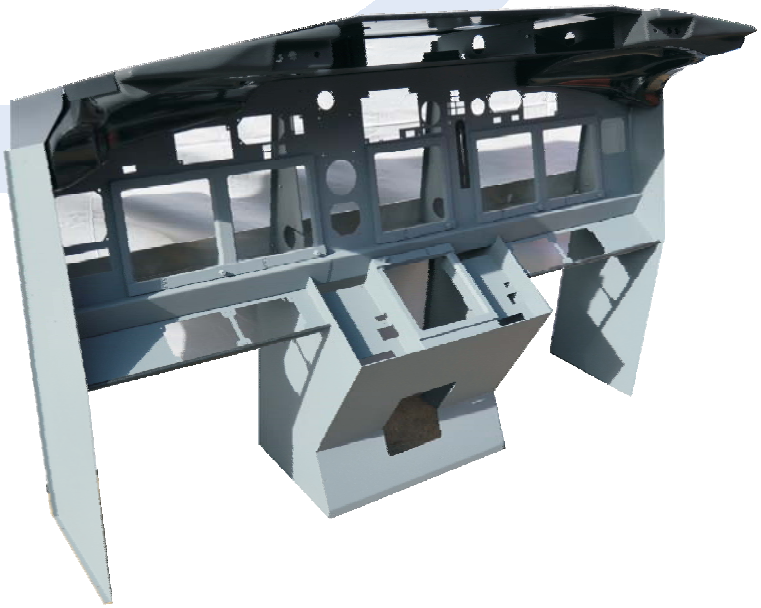


32.- Screw the covers Ref. AE and AF with black screws Ref. B and D.
Atornille las tapas Ref. AE y AF con tornillos negros Ref. B y D.

33.- The assembly for LCD screens will depend of screen type used, supports Ref. G are compatible with VESA supports and are fixed to the MIP with screws Ref. E.
El montaje de las pantallas LCD dependerá de cada tipo de pantalla usado, los soportes Ref. G son compatibles con soportes VESA y se fijan al MIP con tornillos Ref. E.

34.- Final aspect of complete MIP should seem like this:
El aspecto final del MIP completo debería ser así:



MIP

ANNEXE 1/ANEXO 1

Opencockpits components compatibles with MIP structure.
Componentes de Opencockpits compatibles con la estructura del MIP.

EFIS B737, ref. 2M5.
MCP V2, refs. 2M2, 2M3, 2M7.
MCP V3, refs. 2M29, 2M28, 2M30.
FIRE WARNING INDICATOR, ref. INDIFW.
MASTER CAUTION INDICATOR, ref. INDIMC.
SIXPACK CAPTAIN, ref. INDISIXCP.
SIXPACK FO, ref. INDISIXFO.
CHRONO B737, refs. 2M31, 2M33.
NOSE WHEEL IDC, ref. 5T13.
DU LEFT IDC, ref. 5T11.
DU RIGHT IDC, ref. 5T12.
AFDS IDC, ref. 5T9.
GAUGE YAW DAMPER, ref. GAUYAW.
CENTRAL PANEL IDC (FLAPS), ref. 5T15.
GAUGE FLAPS, refs. GAUFLAPS1, GAUFLAPS2.
GEAR LEVER B737, ref. MEC-TREN73.
LANDING GEAR PANEL IDC, ref. 5T10.
MIP INDICATORS KIT, ref. P738B34.
MAIN ILLUMINATION PANEL IDC CAPT, ref. 5T6.
BACKGROUND PANEL CAPT. ref. 5T5.
GROUND PROXIMITY PANEL IDC FO, ref. 5T8.
MAIN ILUMINATION PANEL IDC FO, ref. 5T5.
FMC/CDU B737, ref. 2M27.
USB EXPANSION CARD, ref. 2T3.
MASTER CARD, ref. 2T1.
INPUTS CONNECTION CARD, ref. 3T5.
OUTPUTS CONNECTION CARD, ref. 3T4.
OUTS CARD, ref. 2T19.
USB SERVOS CARD, ref. 2T11.
USB DIMCONTROL CARD, ref. 2T21.
USB OUTPUTS, ref. 2T17.

Remember that the MIP structure doesn´t include any cover, panel, module or gauge. Screws for assembling the panels covers, modules and gauges are not included too.
Recuerde que la estructura del MIP no incluye ninguna tapadera, panel, módulo o gauge. Los tornillos para el montaje de los mismos tampoco están incluidos.

If You need some help for assembly the MIP You can contact with Opencockpits support via e-mail or visiting this link:
Si necesita ayuda para el montaje del MIP puede contactar con el equipo de soporte de Opencockpits vía e-mail o visitando este link:
support@opencockpits.com http://www.opencockpits.com/catalog/info/

MIP

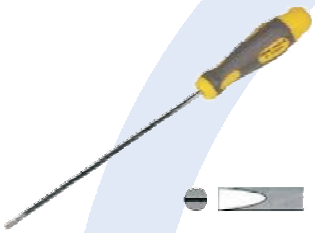
ASSEMBLY ANNEXE 1 /ANEXO DE MONTAJE 1

Tools required for MIP structure assembly.
Herramientas necesarias para el montaje de la estructura del MIP.

2.5 Allen key / Llave Allen de 2.5.

Phillips screwdriver / Destornillador Phillips.

Recommended tools for other works on the MIP / Herramientas recomendadas para otros trabajos en el MIP.



MIP

ASSEMBLY ANNEXE 2 /ANEXO DE MONTAJE 2

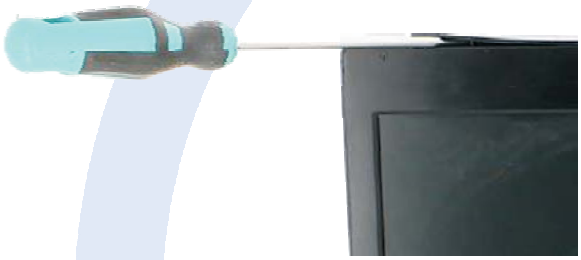
LCD Screens assembly / Montaje de pantallas LCD.

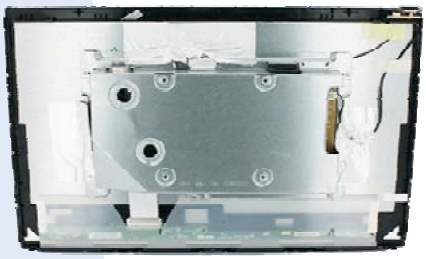
Real dimensions available in MIP structure / Dimensiones reales disponibles en la estructura del MIP.
Captain´s PFD / PFD del capitán: 42x26Cm. (17"-18" wide screen).
EICAS: 36x24Cm. (15"-16" wide screen).
Lower EICAS: 30x20Cm. (10", 4:3 screen).

Example of assembly for captain´s PFD with a Philips 193V5LSB2/10 monitor / Ejemplo de montaje de monitor Philips 193V5LSB2/10para el PFD del capitán.

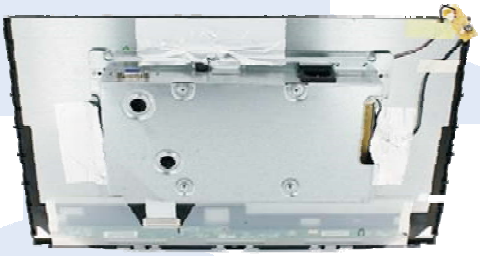
1. Take the monitor and remove the base:
Coger el monitor y desmontar la peana:

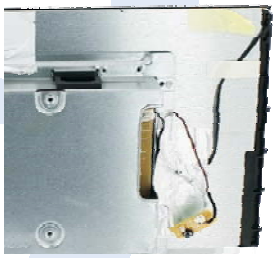
2. Remove the back cover with a screwdriver / Retirar la cubierta trasera con un destornillador:





3. Remove the front frame with a screwdriver / Retirar el marco frontal con un destornillador:





4. With the LCD and controller free of plastics we can proceed to fix the screen to the VESA support / Con el LCD y la controladora libres de plásticos podemos proceder a unirlos al soporte VESA

The screws must not be totally fixed for adjusting the screen in the MIP´s place and we can fix the VGA and power cables too / Los tornillos no deben apretarse totalmente para poder ajustar la pantalla en el espacio del MIP y podemos conectar los cables de VGA y corriente.

5. Place the set into the MIP´s PFD taking care with wires if you have anything installed and fix it in the correct position using the slide holes and tightening the screws.
Poner el conjunto en el hueco del PFD del capitán y ajustarlo en la posición correcta usando las ranuras y apretando los tornillos.

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MIP

ASSEMBLY ANNEXE 3 /ANEXO DE MONTAJE 3

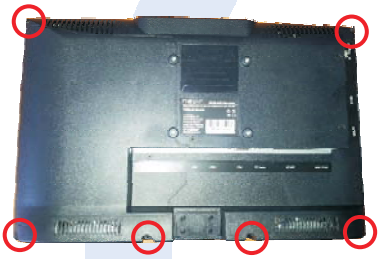
LCD Screens assembly / Montaje de pantallas LCD.

Real dimensions available in MIP structure / Dimensiones reales disponibles en la estructura del MIP.
Captain´s PFD / PFD del capitán: 42x26Cm. (17"-18" wide screen).
EICAS: 36x24Cm. (15"-16" wide screen).
Lower EICAS: 30x20Cm. (10", 4:3 screen).

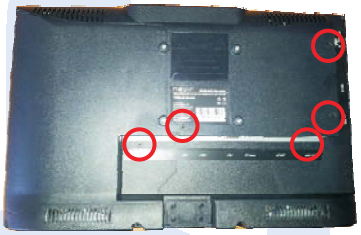
Example of assembly for EICAS with a Nevir 16 NVR-7509-16HD-N TV/Monitor, same monitor fix ok in lower EICAS.
Ejemplo de montaje de monitor/TV Nevir 16 NVR-7509-16HD-N para el EICAS, también sirve para el lower EICAS .

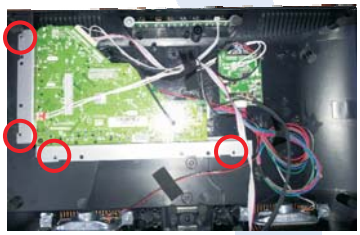
1. Take the monitor and remove the base:
Coger el monitor y desmontar la peana:

2. Remove the back cover with a screwdriver.
Retirar la cubierta trasera con un destornillador:

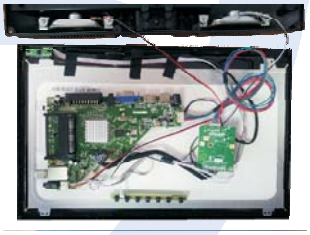


3. Remove the screws which fix the electronics to the backpanel.
Retirar los tornillos que sujetan la electrónica a la cubierta trasera.

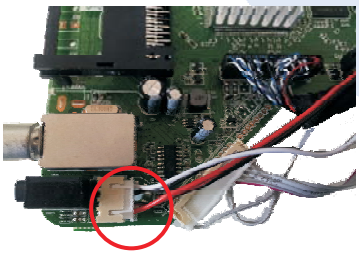


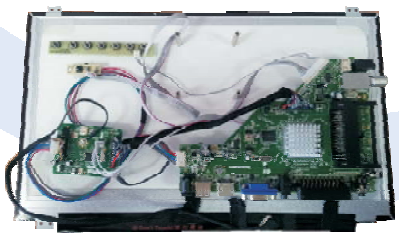


4. Remove the front panel and get the lcd alone, remove electronic cards from the back and fixing supports.
Retirar el marco frontal y dejar el lcd solo, retirar las tarjetas electrónicas de la parte trasera:

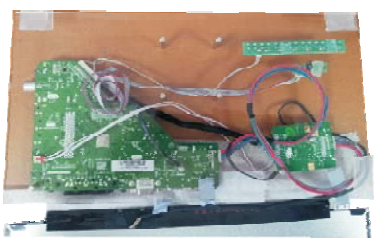


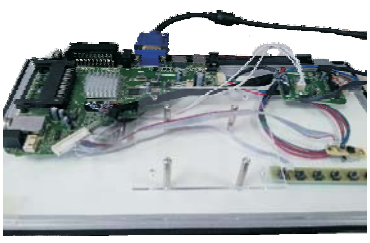
5. Remove the speakers wiring / Retirar los cables de los altavoces.





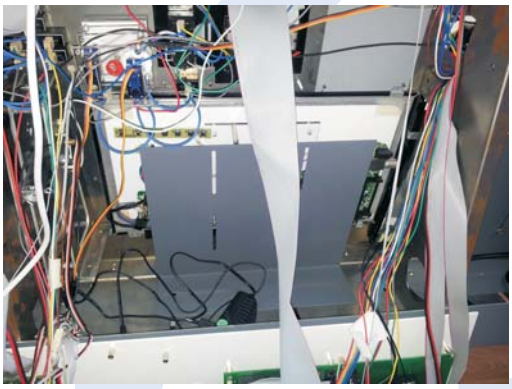
6. We did an acrylic sheet to fix the electronics to the lcd panel with double-sided adhesive tape./ Hicimos una placa de metacrilato para fijar la electrónica al lcd con cinta adhesiva doble cara.





7. We can test the LCD before fixing it into the MIP. / Podemos probar el LCD antes de fijarlo al MIP.

8. Place the set into the MIP´s EICAS taking care with wires if you have anything installed and fix it in the correct position using the slide holes and tightening the screws.
Poner el conjunto en el hueco del EICAS y ajustarlo en la posición correcta usando las ranuras y apretando los tornillos.



The screws must not be totally fixed for adjusting the screen in the MIP´s place and we can fix the VGA and power cables too.
Los tornillos no deben apretarse totalmente para poder ajustar la pantalla en el espacio del MIP y podemos conectar los cables de VGA y corriente.

9. Now the upper screens are ready to be set via software to see the instruments.
Ahora las pantallas de arriba están listas para ser configuradas vía software para ver los instrumentos.

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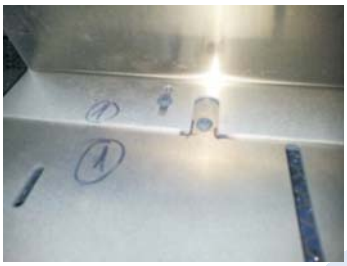
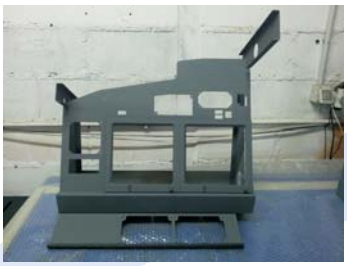
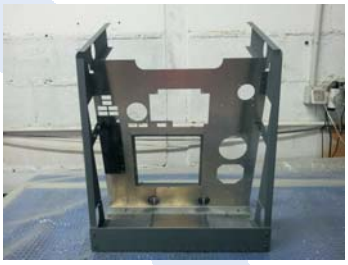
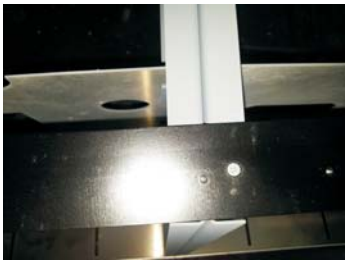
MIP

ANNEXE 5/ANEXO 5

Here you have some extra photos to have more details of assembly.
Aquí tiene algunas fotos extras para tener más detalles del montaje.