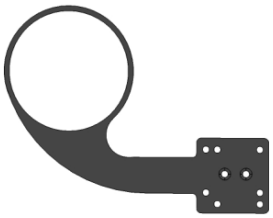
Overview

- The patented PCAR Mounts™ bracket systems are designed for straightforward DIY installation
- These installation instructions are segmented into a seven step process
- Why so many steps? --- it's not because installation is complicated (it's not) but rather because we wanted to show lots of detail (mostly graphics) so that we could pre-emptively answer most of your questions
- Your classic 911 is a treasure --- we respect that --- and we want to show you that installation of a PCAR MOUNTS bracket system does not compromise the integrity of the vehicle in any way
  - Installation requires no invasive, desecrating actions (drilling of holes or use of surface marring adhesives) that would leave evidence of modification should you want to undo the installation
  - Vehicle originality is preserved
- PCAR MOUNTS bracket systems are designed to fit most classic Porsche® 911 vehicles
  - Porsche® is a registered trademark of Dr. Ing. h.c. F. Porsche AG.
  - The PCM-1000 series bracket systems fit all classic Porsche models from **1970 to 1998**
  - It was in 1970 that Porsche started fitting their instruments with a ribbed rubber boot collar-like sleeve that served to hold them in place when pressed into companion openings in the instrument housing panel

  - This ribbed rubber boot collar is a **key element** of the PCAR MOUNTS' bracket anchoring system
  - The earliest classics (1965-1969) used a more complicated mechanical fastening system behind the instruments to hold them in place and did not incorporate the ribbed rubber boot

- The PCAR MOUNTS bracket systems employ a novel (patent pending) **two-end** attachment scheme to achieve sturdy, stable mounting of Mobile Electronic Devices (MEDs)

  (1) The annular ring on the bracket fits tightly over the circumference of the ribbed rubber boot and is anchored to the face of the instrument housing panel when the instrument (clock for LHD vehicles or fuel/oil level gauge for RHD vehicles) is pressed into its companion opening



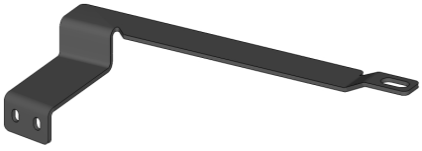
  (2) An L-shaped, flat surface beam, support brace connects behind the bracket with the long arm designed to run along the major axis of the dashboard in the unseen sheet metal channel located under the dashboard overhang

    - It's attached here to stabilize and damp the MED mount from moving vehicle vibration and/or road condition jarring
    - The brace also prevents accidental "levering" of the clock out of the instrument housing panel should you accidentally, forcefully bump the bracket assembly

- The brace fastens to the sheet metal channel two ways depending on car model year

  (1) For vehicles from 1989 to 1998, the brace is equipped with a bolt hole tab at its end which attaches to the dashboard frame using a pre-existing bolt that (with three others) holds the passenger-side lid cover in place

    - There's some uncertainty as to the specific demarcation date when all vehicles were equipped with a passenger side airbag,
      - For US cars, it was 1989
      - For German cars , it was 1991
      - For ROW cars, 1991 may also be the date
    - There may have been some phasing in of passenger side airbags --- **so it's important to check your car as to whether it has the lid cover bolt** ---- don't just rely on the 1989 demarcation date

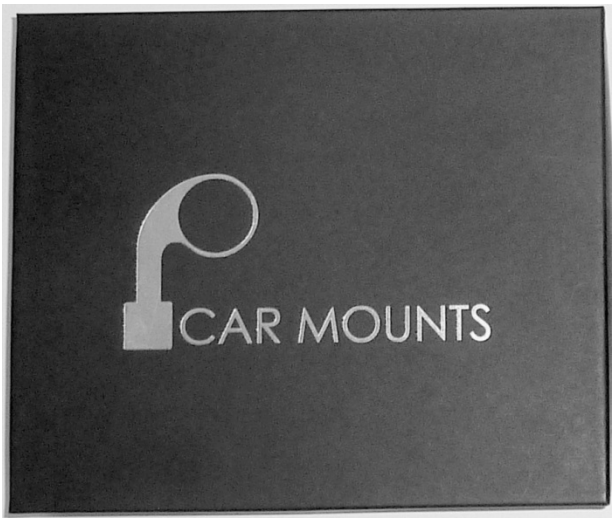


Brace for vehicles with passenger side airbag and lid cover bolt

Brace for vehicles without passenger side airbag

(2) For vehicles from 1970 to 1988, there was no passenger side airbag (or lid cover bolt) and, accordingly, the modified brace has no bolt hole tab.

- The upper surface of the brace is attached to the unseen sheet metal channel surface under the dash overhang using 3M® Dual Lock™ Reclosable Fastener tape
  - Note: 3M® and Dual Lock™ are Trademarks of the 3M Corporation
- The reclosable feature of this attachment allows for simple re-positioning adjustment, if needed
- The Dual Lock™ tape is attached to an unseen sheet metal surface and can be easily removed by slowly peeling it away from the metal surface and carefully cleaning any adhesive residue with 3M® citrus base adhesive cleaner or a little MEK solvent (methyl ethyl ketone)
- Alternatively, if you desire, this brace is equipped with a predrilled hole such that it can be mechanically fastened to the "invisible" sheet metal channel surface with a small, stainless, self-drilling sheet metal screw



What's in the Box?

Bracket System Components

Hardware & Tools

PCM-1000L and 1000R Bracket Systems Shown

Bracket with annular ring & MED mounting platform with machine screw holes arranged in an industry standard AMPS pattern
Note: for PCM-1000R and PCM-1000RE, countersunk centerline holes are on the opposite side

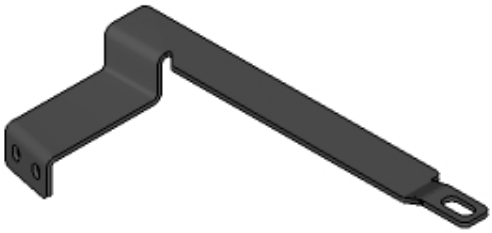
Two 8-32 x 3/8 in. flat socket cap screws

Two 8-32 acorn nuts another four with the MED adapter plate

One M5 x 12mm socket cap screw

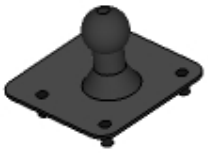
One #10 flat washer for M5 screw

Support arm brace for PCM-1000L bracket system
Note: PCM-1000R uses a mirror image of this brace



M4 hex key and 3/32 in. hex key

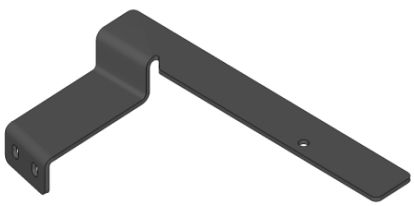
MED adapter plate with 17mm milled aluminum ball and four PEM studs with acorn nuts



PCAR MOUNTS
Pry-bar tool

PCM-1000LE support arm brace

Support arm brace for PCM-1000LE Note: PCM-1000RE uses a mirror image of this brace

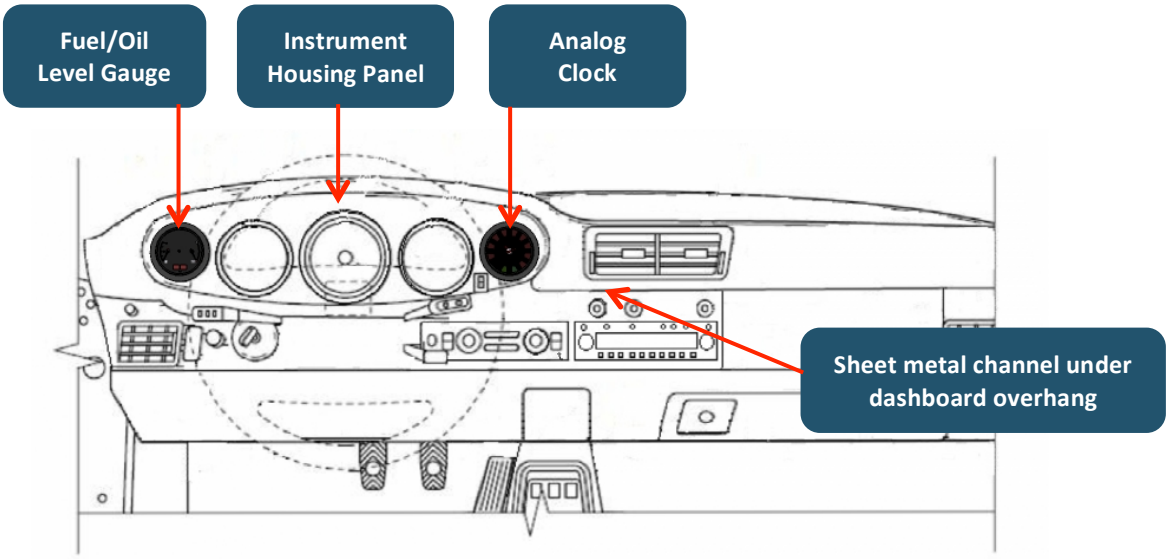


3M® Dual Lock™ Reclosable Fastener tape and alcohol wipe for cleaning attachment surfaces

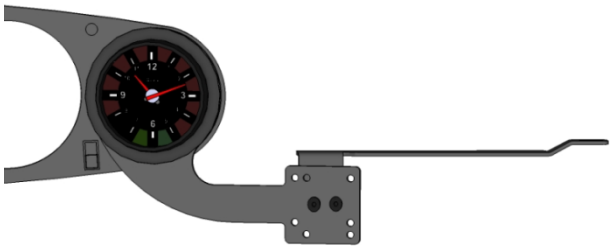
One #6 x 3/8 in. hex head/washer stainless self-drilling screw

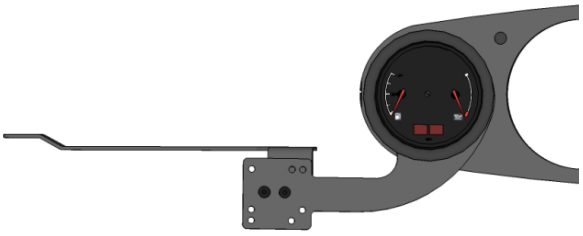
Bracket System Placement

- The interior design of the classic Porsche 911 remained remarkably unchanged throughout its 33 years of production.
- The legacy dashboard is dominated by a symmetrical cluster of five gauges housed in a slightly concave, oval shaped panel in front of the steering wheel
- The extremity instruments (analog clock and fuel/oil Level gauge) serve as **primary anchoring points** for the PCAR MOUNTS bracket systems
  - Analog clock for LHD vehicles
  - Fuel/oil level gauge for RHD vehicles
- A sheet metal channel running under the dashboard overhang provides a **second anchoring point** for the bracket system
- Note: For RHD vehicles, the instrument housing panel is shifted to the right (with gauge configuration intact) while the rest of the dashboard is a mirror image of the schematic below



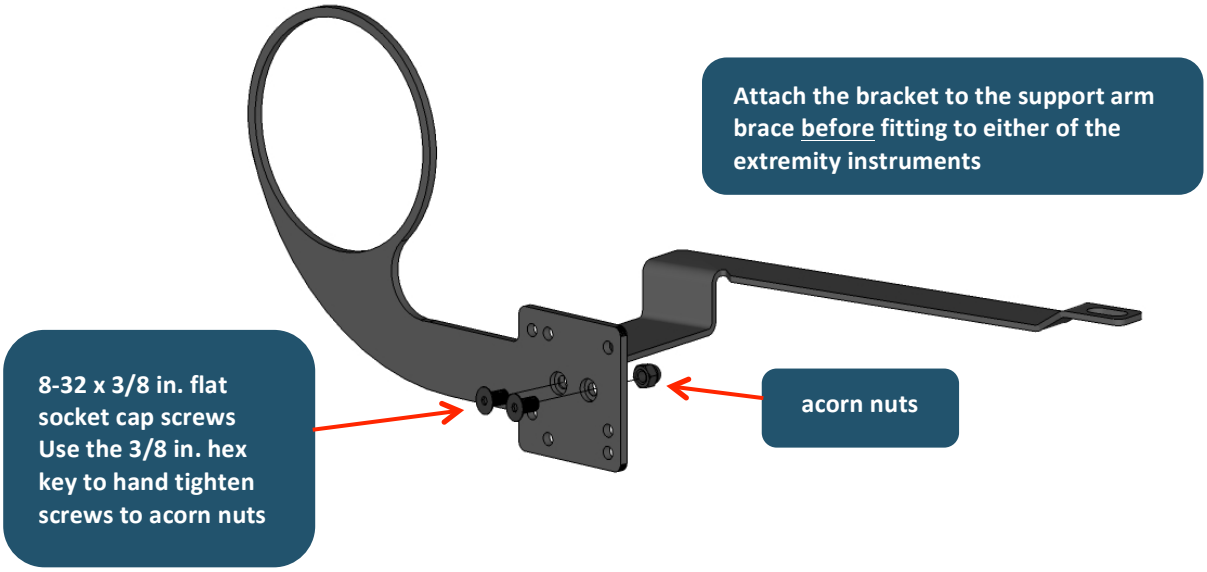
For LHD vehicles, the PCM-1000L bracket system is installed on the analog clock



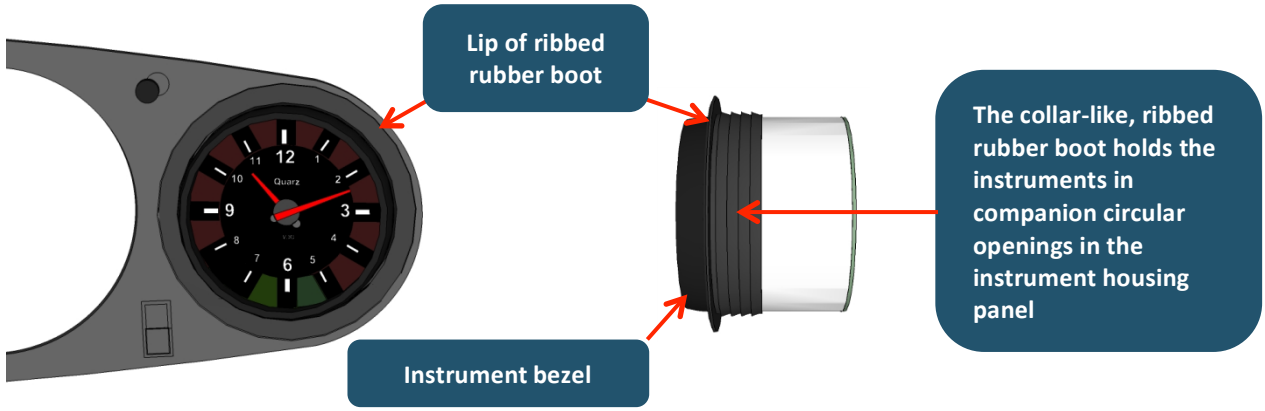


For RHD vehicles, the mirror image, PCM-1000R bracket system is installed on the Fuel-Oil Level Gauge

Step (1): Connect PCM-1000 Bracket to the Support Arm Brace



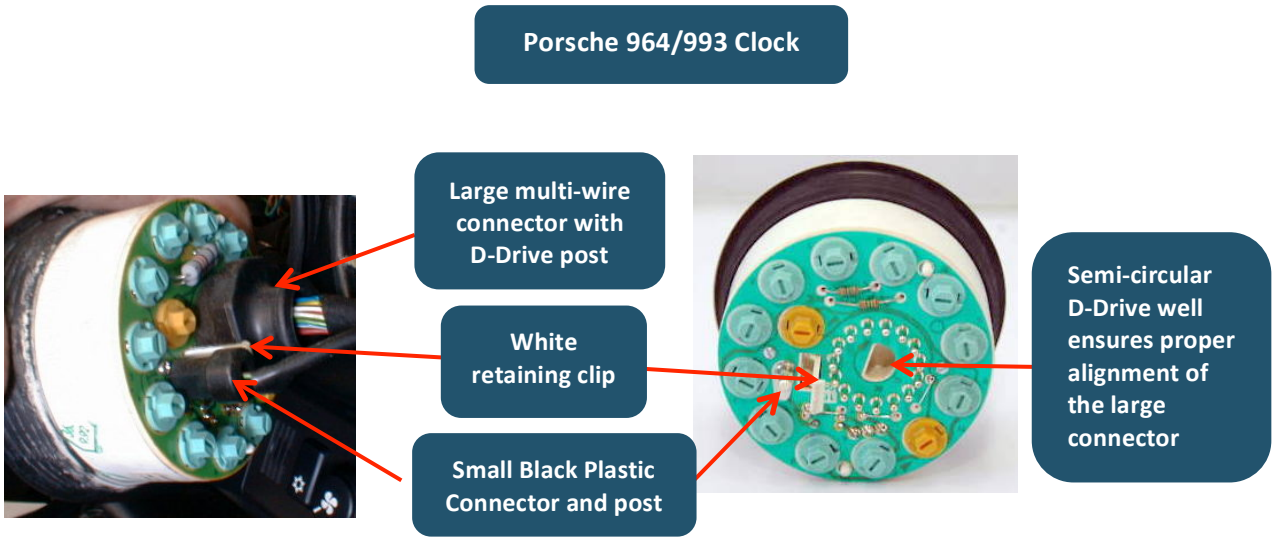
Step (2): Remove clock or fuel/oil level gauge from instrument housing panel



PCAR MOUNTS
Pry-bar tool

- Starting in 1970, the five cylindrical gauges in the classic 911 oval shaped instrument housing panel were each fitted with a collar-like, ribbed rubber boot.
- The ribbed rubber holds the gauges in place via friction when they are pressed into companion openings in the instrument housing panel.
- To remove a gauge, use the PCAR MOUNTS pry-bar tool to slip under the lip of the ribbed rubber boot behind the instrument bezel and carefully lever the instrument outward from the plane of the instrument housing panel.
- Work the levering side to side around the circumference of the instrument and grab the bezel and pull the instrument outward.

Step (3): Disconnect the wiring connectors from the rear of the clock



Removing and replacing the wiring connectors is straightforward
Porsche designed the connectors such that they insert one way only
The one "trick" is the sequence of removal/replacing the two connectors as explained below

To disconnect the wiring from the rear of the clock:

- **First:** Make sure you don't have the key in the ignition
  - we don't want any live disconnected wires
- **Second:** Pull the small black plastic connector free from its post.
  - ***You can't get the large multi-wire connector off until the small black one is out of the way***
  - The soldering of the wire to this black connector can be weak, so make sure that ***you don't stress the wire***
  - The pry-bar tool can be used to lever the black plastic connector upward if needed
- **Third:** With the black connector removed, pull slightly (bend) the white retaining clip sideways out of the way and remove the large multi-wire connector free from its ring of posts
  - The pry-bar tool can also be used to lever the connector upward if needed
  - The large connector is designed to insert one way only into a semi-circle, center, D-Drive well on the back of the clock so don't worry about alignment of pins and wires when replacing it
- **For RHD vehicles:** The fuel/oil level gauge is removed from the instrument housing panel as in the Step (2) diagram

- The wiring connectors for a 964/993 fuel/oil level gauge shown below disconnect easily

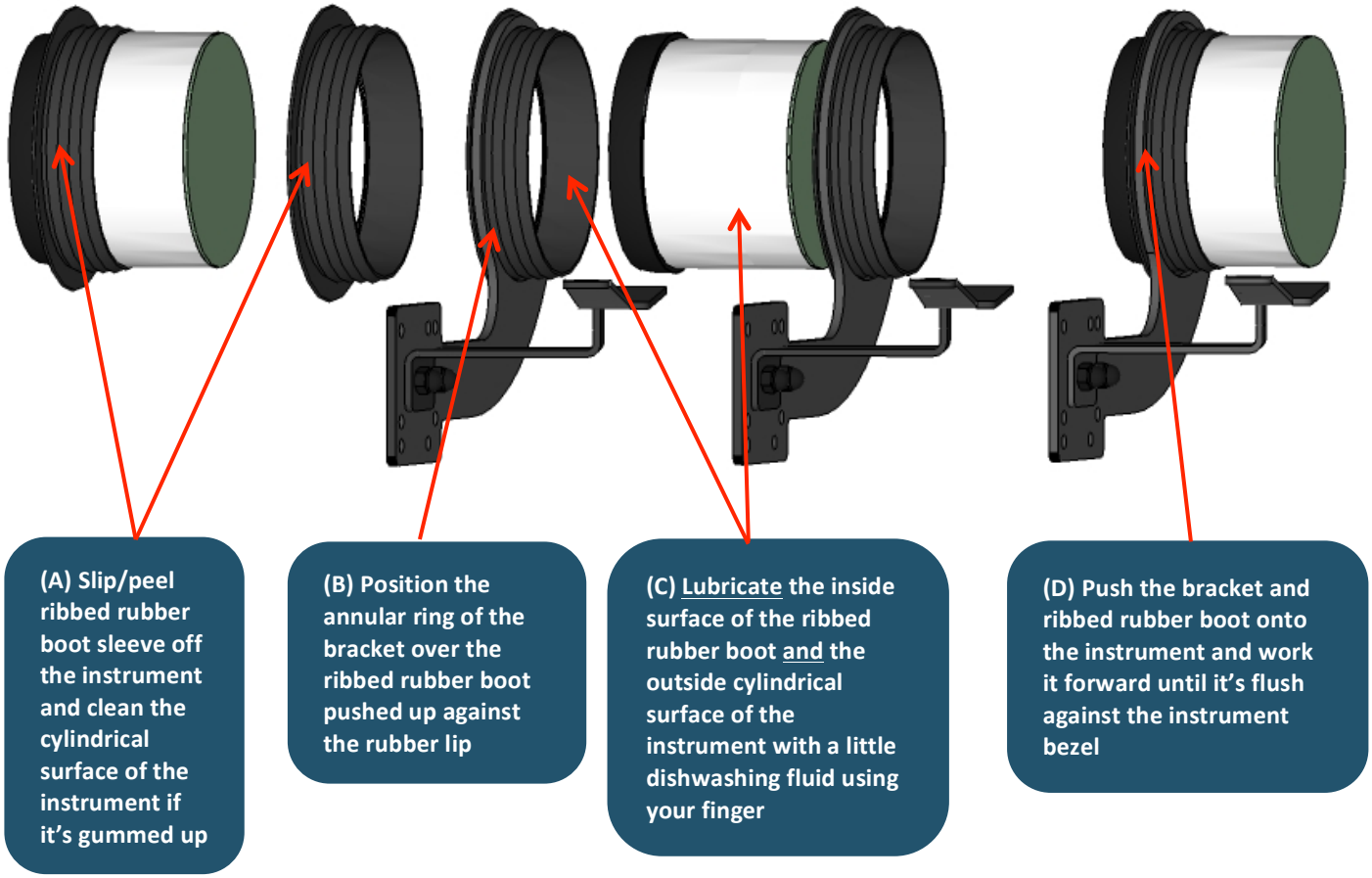
Porsche 964/993 Fuel/Oil Level Gauge

Again, removing and replacing the wiring connectors is straightforward
Porsche designed the connectors such that they insert one way only

- Early (1970s) Porsche 911 clocks and fuel/oil level gauges are identical in face radius but have different wiring and connectors that are easy to remove and replace

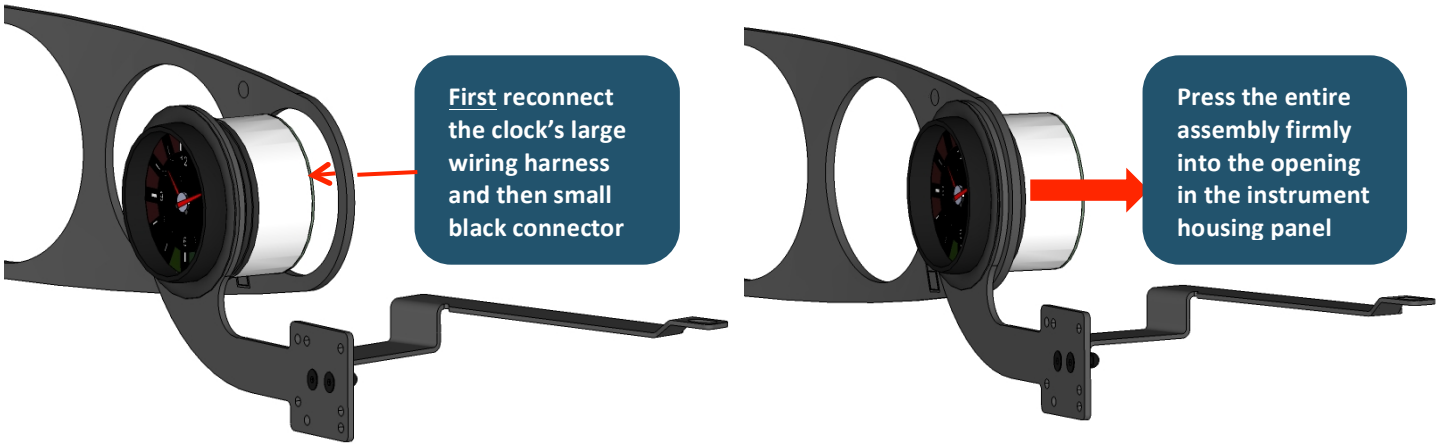
Porsche 911 Clock (1973)

Step (4): **Insert bracket annular ring over the ribbed rubber boot & onto the instrument**



- The ribbed rubber boot and instrument can be a little "gummy" and can be cleaned with some soapy water or WD-40® spray lubricant
  - WD-40® is a registered trademark of the WD-40 Company
- The bracket's annular ring is sized for **a tight fit**
- **IMPORTANT TIP :** **Lubricate** the inside surface of the rubber boot **and** outside cylindrical surface of the instrument with a little concentrated dishwashing fluid using your finger to help in sliding the bracket ring and boot forward into position
- The bracket assembly is fully in place when the annular ring of the bracket abuts the flange created by the lip of the rubber boot and metal bezel of the instrument
- You may have to rearrange the positioning and alignment of the ribbed rubber boot in this process to ensure it fits symmetrically and evenly over the instrument circumference with rubber boot lip pressed against the instrument bezel

Step (5): Press the instrument, fit with bracket assembly, into the instrument housing panel

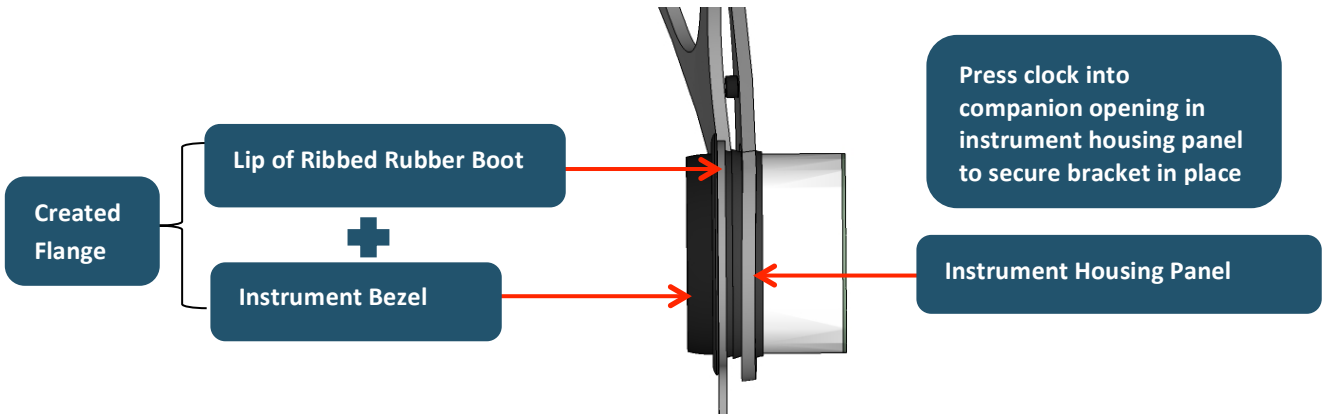


For the PCM-1000L or 1000LE Bracket Systems:

- Align the bracket-on-clock-assembly with the opening in the instrument housing panel
- **Reconnect the clock's wiring connectors** putting the large multi-wire connector on first
  - The semicircle, D-Drive alignment post on the connector fits into the similarly shaped D-well in the clock
  - Press the large connector onto the clock until the white retaining clip snaps closed
  - Replace the small black plastic connector and wire --- it's designed to go on only one way
- Press the entire clock and bracket assembly firmly into the instrument housing panel opening
  - Make sure to adjust the orientation of the clock such that its numbers align appropriately with the major axis of the dashboard

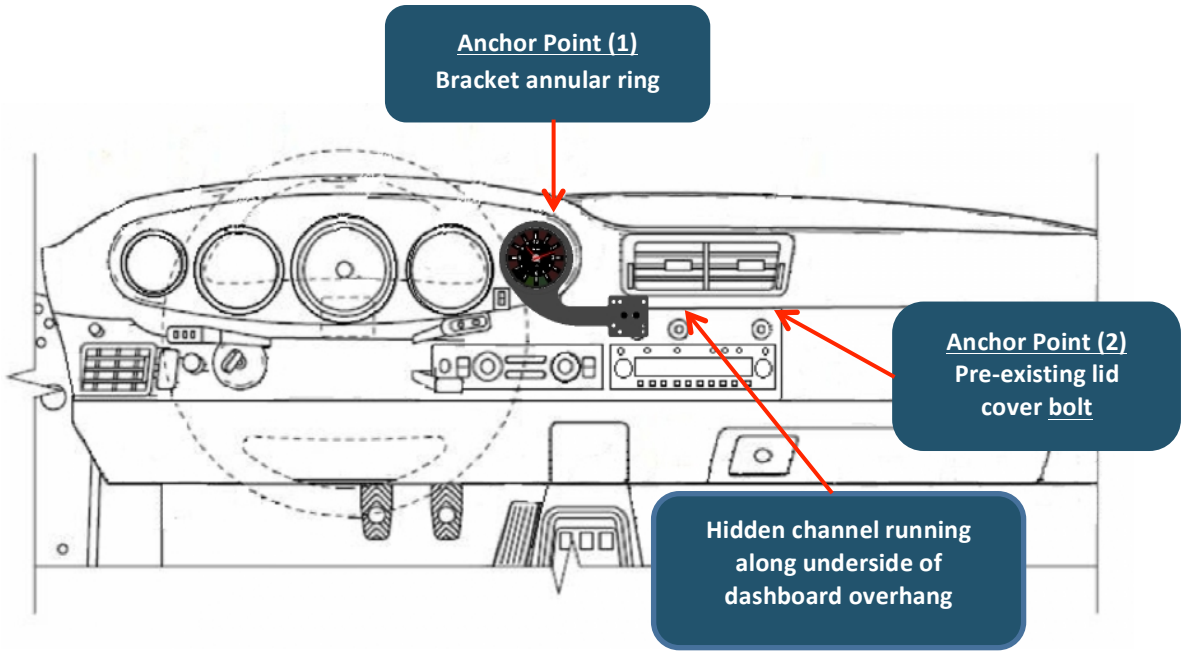
Some More Detail on Primary Bracket Anchoring Scheme

- The annular ring of the bracket is **sandwiched** between the face of the instrument housing panel and the flange created by the instrument bezel and lip of the ribbed rubber boot.



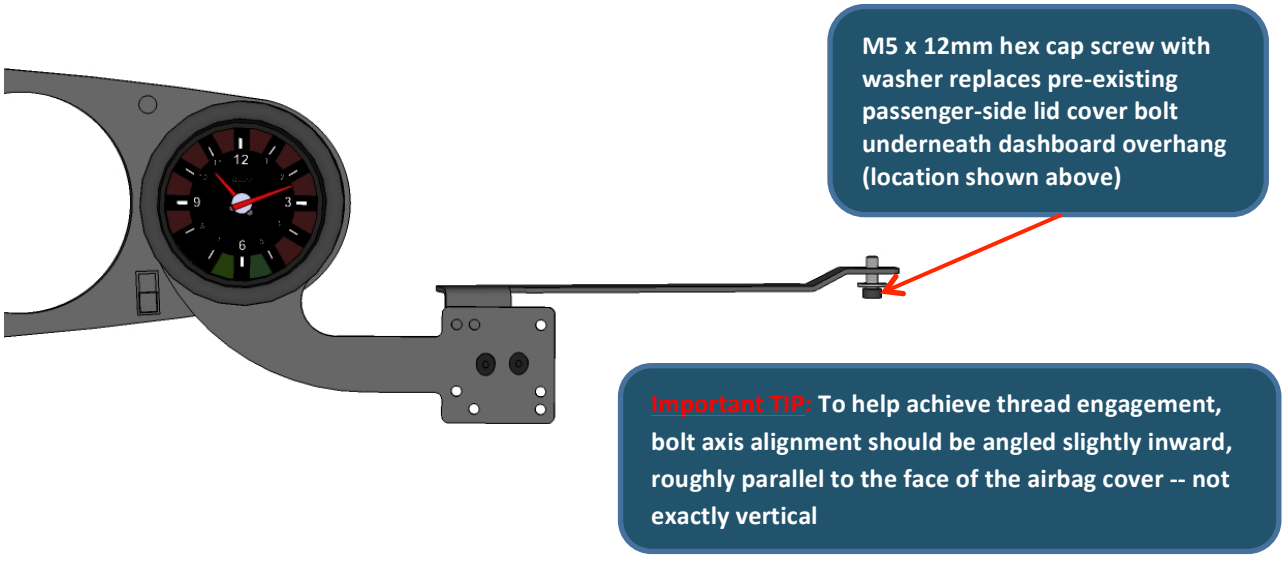
Step (6): Secure the bracket's support arm brace to the channel under the dashboard overhang

Two-end anchoring of the bracket system provides for enhanced MED mounting stability



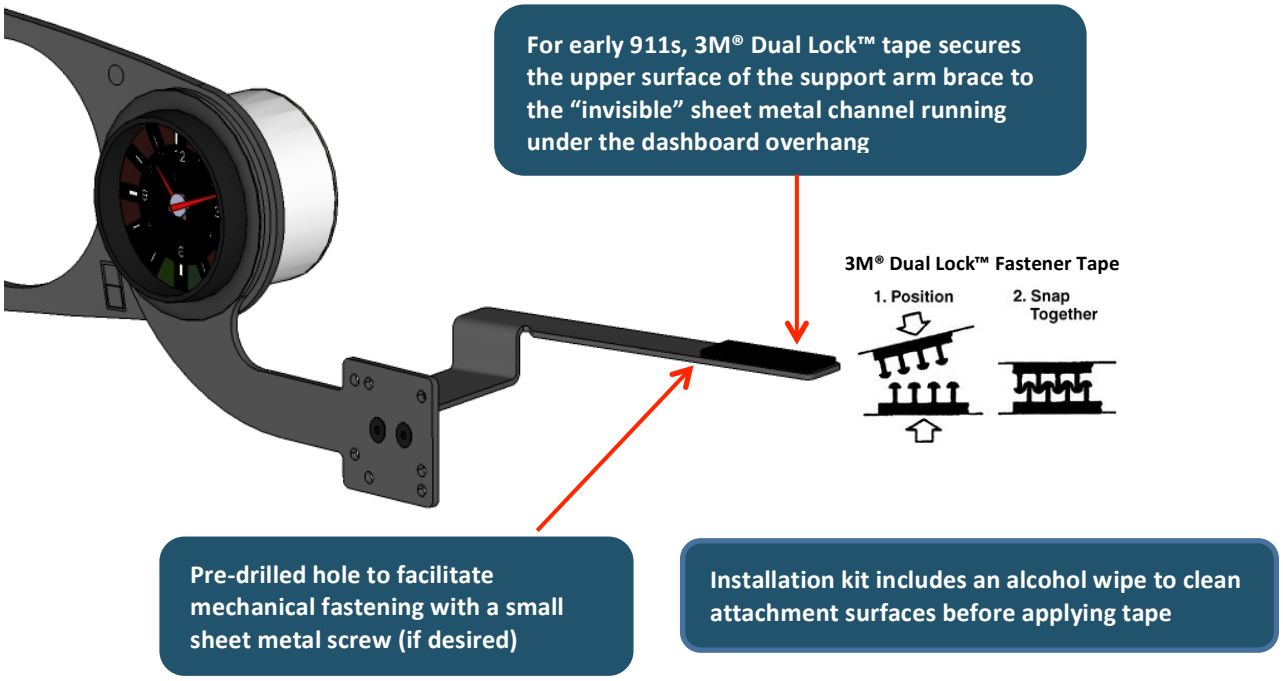
For the PCM-1000L and 1000R Bracket Assemblies

- The long arm of the L-shaped support brace runs parallel to the major axis of the dashboard in a hidden channel along the underside of the dashboard overhang
- For classic 911 model years ≥ 1989 (for US vehicles), the support arm brace is fastened to the dashboard using one of four pre-existing bolts used to hold the passenger side lid cover in place (near the cigarette lighter)



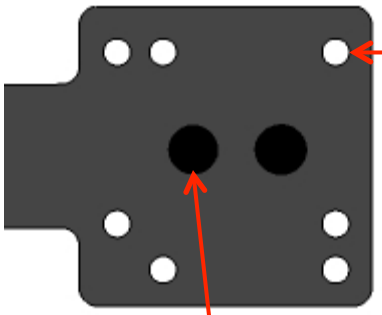
- Undo the passenger-side lid cover cap screw using an M4 Hex key
  - It may have been treated with Loctite or other thread locking adhesive, so use a little muscle
- Replace the pre-existing hex cap screw with the included, slightly longer M5 x 12mm hex cap screw (thread locking adhesive is not necessary)
  - Fit the hex cap screw with the included #10 washer
- Double check that the instrument face is **aligned properly** in the instrument housing panel
- With everything in place and aligned, proceed to tighten the small 8-32 face plate machine screws that connect the bracket to the brace and then tighten the replaced M5 lid cover bolt

For PCM-1000LE and 1000RE Bracket Assemblies Early Vehicles (1970 to 1988)



- The early classic 911s from 1970 to 1988 are not equipped with a passenger side airbag and have no associated pre-existing lid cover bolt
- For these vehicles, the upper surface of the brace is fastened to the dashboard overhang channel surface using 3M® Dual Lock™ tape which provides excellent bracket anchoring stability
  - The reclosable feature of this fastener allows for easy re-alignment adjustments
- Nevertheless, If desired, this brace is also designed with a predrilled hole such that it can be mechanically fastened to the "invisible" sheet metal channel surface by using a small self-drilling sheet metal screw

Step (7): Attach the MED Adaptor Plate with 17mm Ball to the Bracket



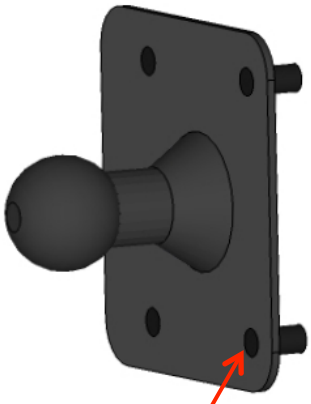
The MED mounting platform on the PCAR MOUNTS' bracket is configured with seven 3/16 in. diameter holes arranged in the industry-standard AMPS pattern with rectangular spacing (38mm x 30mm)

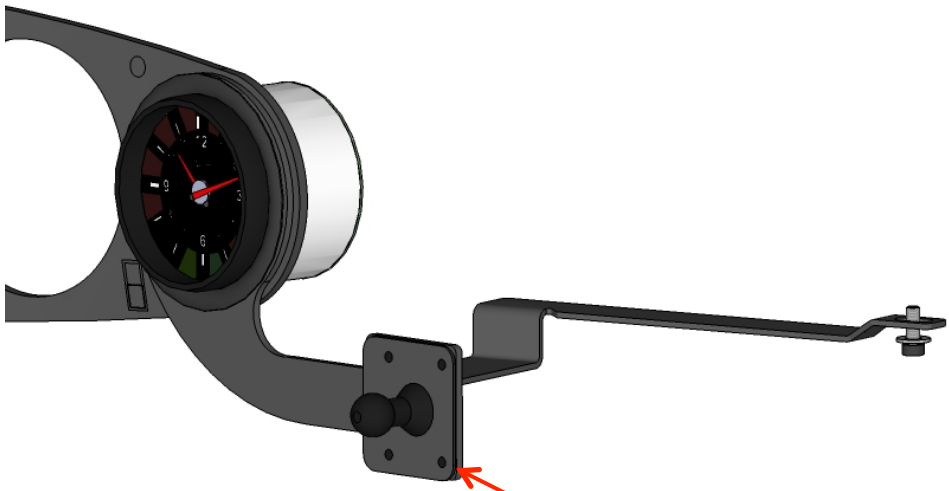
The AMPS hole pattern is provided in both a vertical and horizontal configuration

There are many different MED adapter units and/or device holders that can be attached to the PCM-1000 series bracket system

PCAR MOUNTS supplies a very high quality MED adaptor plate configured with a 17mm ball which has become a defacto-standard for fitting the socket adaptors of many MED docking units

With the bracket system properly aligned, tighten the two 8-32 flat socket cap screws with the small hex key





MED Adapter Plate with four PEM studs arranged in the AMPS pattern and 17mm milled aluminum ball

MED adapter plate is fastened with acorn nuts using either a 5/16 in. or 8mm wrench for tightening nuts