

## A 2x2 MiMo LTE and WIFI multi purpose shark fin antenna for GNSS, GPS, 2G/3G/4G/5G and dual WIFI 2.4/5.8 GHz

### DESCRIPTION

- > In-built 2x2 MiMo LTE antenna (617-960 MHz and 1710-3800 MHz)
- > 2x2 MiMo Dual WiFi 2.4 and 5.8 GHz.
- > GNSS antenna for GPS L1, Glonass, Beidou and Galileo.
- > Supports external whip.
- > No diplexer needed.
- > The ProFinPlus provides antennas for multiple technologies.
- > The ProFinPlus covers , 4G, GNSS, GPS L1, inc. 5G cellular bands, dual WIFI 2.4 and 5.8 GHz and an optional whip.
- > The ProFinPlus can support antenna whip in the range 66 - 6000 MHz.
- > All ProFinPlus configurations are prepared for external whip.
- > Easily removable whip for car wash.
- > Full hemispherical coverage for the GNSS and GPS (optional).
- > Built-in high gain, low noise amplifier.
- > Right-Hand Circular Polarization.
- > 3 - 15 VDC for GNSS supply.
- > DC supply via GNSS RF-connector.
- > Model with optional GPS.



### SHOWN WITH OPTIONAL EXTERNAL WHIP.



### SPECIFICATIONS

Electrical	
Model	ProFin Plus
Frequency	4G/5G 2x2 MiMo: 617 - 960 MHz, 1710 - 3800 MHz WiFi 2x2 MiMo: 2400 - 2500 MHz, 5000 - 6000 MHz
Antenna Type	Mobile Shark Fin Style Antenna
Polarisation	Vertical
Impedance	50 Ω
Gain (peak)	4G/5G 4dBi (617 - 960 MHz) 4G/5G 7dBi (1710 - 3800 MHz) WiFi 6 dBi (2.4 GHz & 5.8 GHz)
Isolation	(With 5m RG58) >10 dB for 617 - 960MHz >20 dB for 1710 - 3800MHz >25 dB for WiFi
Correlation Coefficient	< 0.4 for 617 - 700 MHz < 0.25 for 700 - 960 MHz < 0.1 for 1710 - 3800 MHz
VSWR	< 2.2:1 for 617 -960 MHz < 2.0:1 for 1710 - 3800 MHz < 2.0:1 for 2400 - 2500 MHz < 2.0:1 for 5000 - 6000 MHz
Max. Input Power	25 W for 4G/5G and WIFI 100 W for whip

Mechanical	
Connection(s)	SMA(m) (all antennas)
Materials	Reinforced PA, Zamak 5
Installation Torque	4 +/- 0.5 Nm
Colour	Black (RAL 9005)
Dimensions	Approx. 83 x 173 mm / 3.3 x 6.8 in.
Max. Roof Thickness	3 mm / 0.12 in.
Whip Connection	M6
Height	66 mm/ 2.6 in.
Weight	0.35 kg / 0.77 lb
Mounting	18.5 mm / 0.8 in. dia. hole Max roof curvature: 2.0 mm / 0.08 in. (on 173 mm)

Environmental	
Operating Temperature Range	-50°C to +75°C
Water Resistance	IP67

GPS Antenna	
P1dB (GPS Amplifier)	Approx. +7 dBm
Noise Figure (GPS Amplifier)	< 1.5 dB (typical 1.1 dB)
Gain (GPS Amplifier)	22 dB ± 2 dB
Selectivity (GPS Amplifier)	> 25 dB down @ 0 - 1535 MHz > 25 dB down @ 1635 - 3000 MHz
VSWR (GPS Amplifier)	< 2.0:1
Frequency (GPS)	1575 MHz
Power Supply (GPS)	3 - 15 VDC
Current Consumption (GPS Amplifier)	< 12 mA
Polarisation (GPS)	RH Circular
Impedance (GPS)	50 Ω

GNSS Antenna	
P1dB (GNSS Amplifier)	Approx. +7 dBm
Noise Figure (GNSS Amplifier)	1.6 dB (typ.)
Cross Polar Discrimination (GNSS)	> 10 dB (typ.)
Gain (GNSS Amplifier)	28 dB (typ.) ic in axial direction (typ.)
Selectivity (GNSS Amplifier)	> 25 dB down @ 0 - 1540 MHz > 27 dB down @ 1625 - 3000 MHz
VSWR (GNSS Amplifier)	< 2.0:1
Frequency (GNSS)	1559 - 1609 MHz (GPS L1, Glonass, Beidou and Galileo)
Power Supply (GNSS)	3 - 15 VDC
Current Consumption (GNSS Amplifier)	Approx. 20 mA
Polarisation (GNSS)	RH Circular
Impedance (GNSS)	50 Ω

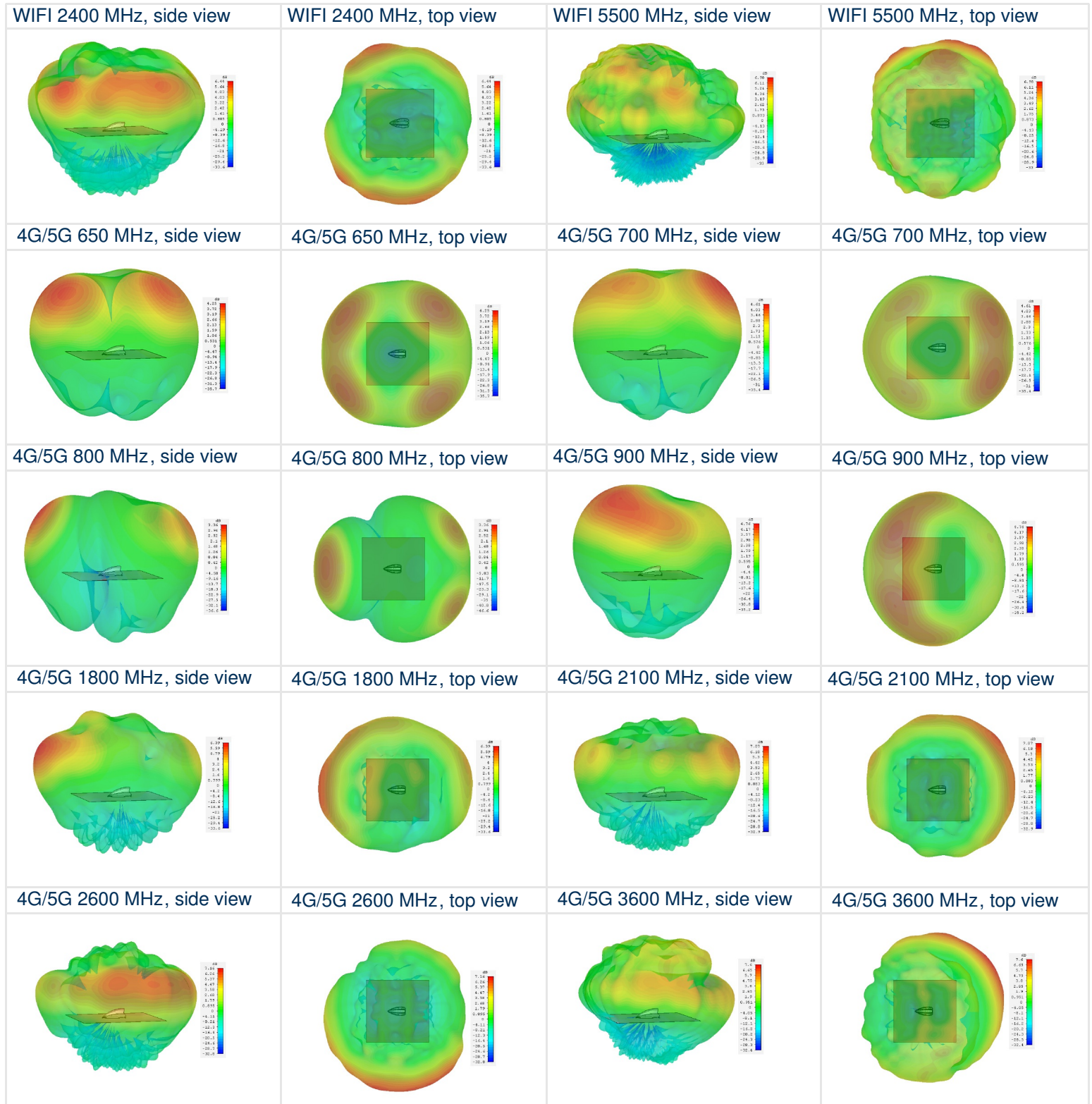
ORDERING

Type	Product No.	Description
ProFin Plus G1	130002476	2 x 4G/5G, 2 x WiFi, GNSS
ProFin Plus G2	132000269	2 x 4G/5G, 2 x WiFi, GNSS, GPS (L1)
<b>Accessories - Whips</b>		
MP-SS-S/FM whip	132000244	Stainless steel whip with shock spring.
MP-SS-S/DAB whip	132000260	
MP-SS-S/150 whip	132000245	Stainless steel whip with shock spring. (Adjustable by customer)
MP-B/450/405 MHz whip	132000247	Flexible whip (0dB acc.to TIA-329.2-C
MP-B/450/445 MHz whip	132000248	Flexible whip (0dB acc.to TIA-329.2-C
MP-SS/450-4/395 MHz whip	132000249	Stainless steel collinear whip (4 dB acc. to TIA-329.2-C)
MP-SS/450-4/425 MHz whip	132000250	Stainless steel collinear whip (4 dB acc. to TIA-329.2-C)
MP-SS/450-4/455 MHz whip	132000251	Stainless steel collinear whip (4 dB acc. to TIA-329.2-C)
MP-G-S/150/450/.../...whip	132000224	Flexible whip with shock spring (factory adjusted)
MP-G-S/450/FM/395 whip	132000256	Flexible whip with shock spring (factory adjusted)
<b>Accessories - Cables</b>		
5m ProFin Plus Cable Kit	132000270	"7 pcs. RG174 cables in one cable bundle. Provides ease of installation"
3m SMA(f)-BNC(m)	130002416	
4m SMA(f)-BNC(m)	130002417	
5m SMA(f)-BNC(m)	130002418	
3m SMA(f)-TNC(m)	130002421	
4m SMA(f)-TNC(m)	130002422	
5m SMA(f)-TNC(m)	130002423	
3m SMA(f)-SMA(m)	130002426	
4m SMA(f)-SMA(m)	130002427	
5m SMA(f)-SMA(m)	130002428	
<b>Accessories - Adaptors</b>		
SMA(f)-N(m)	130002429	
SMA(f)-BNC(m)	130002430	
SMA(f)-TNC(m)	130002431	
SMA(f)-SMB(m)	130002432	

WHIP MODELS



RADIATION PATTERNS



## GAIN TABLE FOR IN-BUILT ANTENNAS

TYPE	FREQUENCY (MHz)	AVERAGE PEAK GAIN (dBi)	AVERAGE GAIN H-PLANE (dBi)	AVERAGE GAIN H-PLANE (dBq) *
4G/5G	650	4.0	-1.0	-1.0
	900	5.0	-2.0	-1.0
	1800	6.0	-2.0	0.0
	2500	7.0	-1.0	1.0
	3600	7.0	-1.0	0.0
WIFI	2400	5.0	-3.0	-2.0
	5500	6.0	-2.0	-3.0

\* According to TIA-329.2-C

## ORDERING DESIGNATIONS - WHIP MATRIX

TYPE	DESCRIPTION	FM 88-108 MHz	VHF 144..240 MHz	UHF 380..470 MHz	UHF (Gain) 380..470 MHz
MP-SS-S/FM whip	Stainless steel whip with shock spring.	◆			
MP-SS-S/150 whip	Stainless steel whip with shock spring.	◆	◆		
MP-SS-S/DAB whip	Stainless steel whip with shock spring.	◆	◆		
MP-B/450/...whip	Flexible whip (0 dB acc. to TIA-329.2-C)			◆	
MP-SS/450-4/...whip	Stainless steel collinear whip (4 dB acc. to TIA-329.2-C)				◆
MP-G-S/150/450/.../...whip	Flexible whip with shock spring (factory adjusted)		◆	◆	
MP-G-S/450/FM/... whip	Flexible whip with shock spring (factory adjusted)	◆		◆	

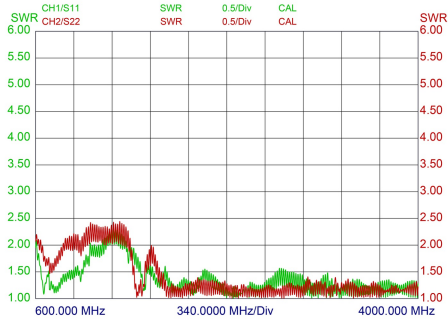
For more information we refer to the corresponding whip datasheets. The in-built antennas can be used without an external ground-plane, but with degraded electrical performance.

## ORDERING DESIGNATIONS - MOUNT MATRIX

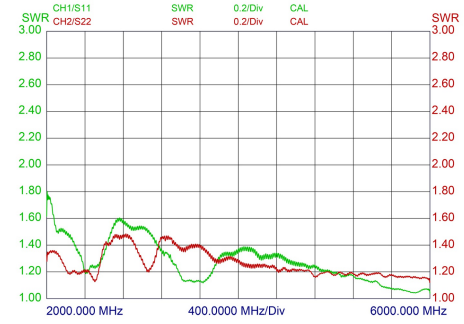
TYPE	PRODUCT NO.	DESCRIPTION	2G/3G/4G/5G 617 - 960 MHz 1710 - 3800 MHz	WIFI 2400 - 2500 MHz 5000 - 6000 MHz	GNSS	GPS L1
ProFin Plus G1	132000269	2 x 4G/5G, 2 x WIFI, GNSS	◆	◆	◆	
ProFin Plus G2	132000269	2 x 4G/5G, 2 x WIFI, GNSS, GPS	◆	◆	◆	◆

TYPICAL VSWR CURVES

Typical VSWR Curves 2 x 4G/5G \*

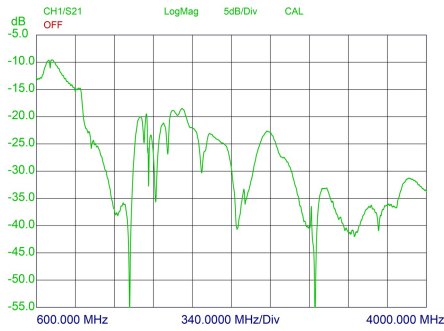


Typical VSWR Curves 2 x WIFI 2.4/5.8 GHz \*

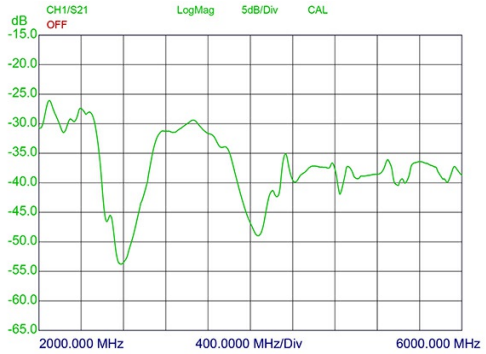


Typical Isolation Curves

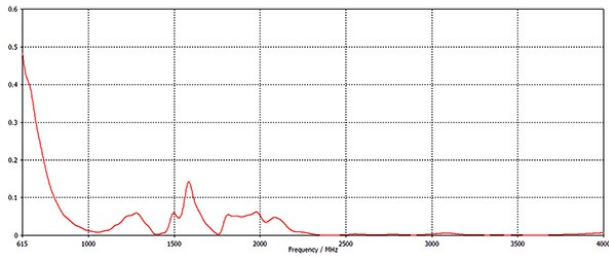
Isolation 2 x 4G/5G \*



Isolation 2 x WIFI 2.4/5.8 GHz \*



Correlation Coefficient 4G/5G\*\*



\* Measured with no whip and 5 m (197 in.) of RG 58 cable on a 500 x 500 mm (19.6 in. x 19.6 in.) ground plane.

\*\* Simulated in free space with no whip, no ground plane and no additional cable.

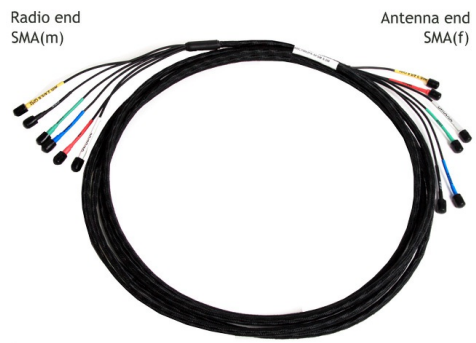
EU DECLARATION OF CONFORMITY

Hereby Amphenol Procom declare that the product type ProFin is in compliance with EU Directive 2014/53/EU.

The full text of the EU Declaration of Conformity is available at:

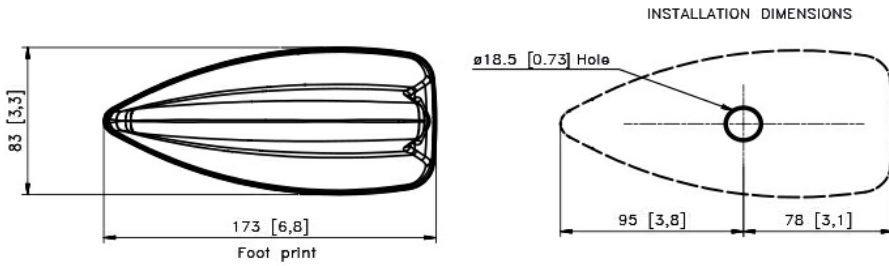
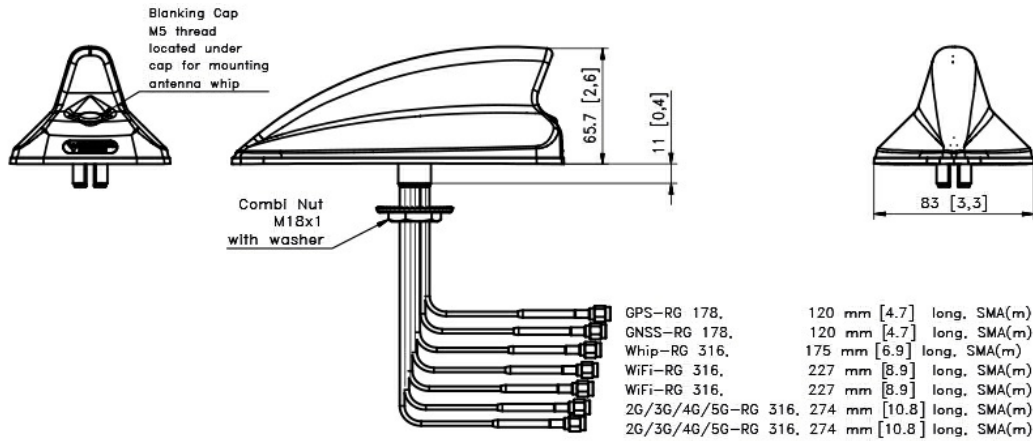
<http://procom.dk/images/shop/catalog/pdf-for-catalogues/Declaration-of-Conformity-ProFin.pdf>

## ACCESSORIES - CABLES



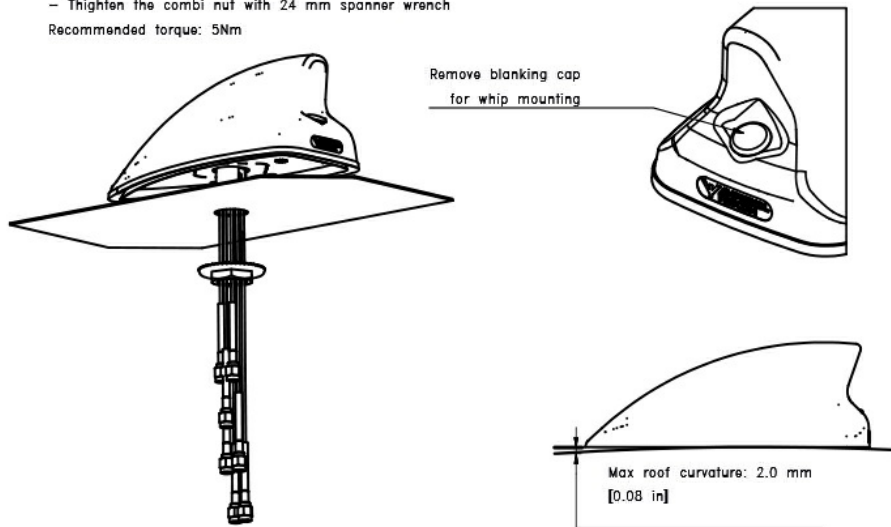
5 m ProFin Cable Kit.  
7 pcs. RG 174 cables in one cable bundle (ø9 mm).  
Provides ease of installation.

MOUNTING DETAILS



Mounting Instructions:

- Drill a 18.5-19 mm hole in the car roof
  - Max roof curvature: 2.0 mm [0.08 ] (on 173mm)
  - Pull the cables through the hole.
  - Tighten the combi nut with 24 mm spanner wrench
- Recommended torque: 5Nm



All dimensions are given in mm [in.]

**Important:** The whip should always be dismantled during car wash.