

In 1925, engineers devised the striated lens. This was a fundamental development, since it became possible to direct the light beam. A further milestone in the middle of the 1930s was the introduction of lamps

## LIGHTING THE WAY

equipped with two filaments and a plate.

This made it possible to switch from low-beam to high-beam using a control function on the dashboard or a control switch. The simple logic of all or nothing ~ light or darkness ~ became a thing of the past. At the same time, headlamps were continuously increasing their range. From 125metres in 1925 headlamps grew to 175metres in 1950 thanks to the use of 45 watt bulbs.

The following article appeared in issue TA80 of Traction Avant the magazine of the French club La Traction Avant Universelle.

1] 15 Six equipped with the famous 'Equilux 335' and additional Marchal lamps



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### AFTERMARKET HEADLAMPS

To personalize their cars and improve lighting and indicators many owners equipped their

cars with aftermarket accessories: different headlamps and rear lights, fog and spotlights and all kinds of devices. [Image 1]

The Traction was factory equipped with headlamps [called 'projecteurs'] with 'aerodynamic' shells longer than those of previous Citroën models. Before the

*Continued on page 27*

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[35/03]

*Continued from page 18*

war headlamps were chrome plated. After the 1935 Paris Motor Show the flat glass lenses were replaced with convex ones with the appearance of an eye ball from the side.

#### THE SUPPLIERS

Three suppliers equipped the Traction during its long life: Cibié, Marchal, and Ducellier. After the war the headlamp shells were enamelled, the paint matching the body colour. Chrome headlamps, similar to the original equipment, were available from Citroën by special order either delivered with the car or after sale. Many headlamps, different from the original equipment, were also available.

#### MARCHAL AND THE EQUILUX

The Marchal Company, created in 1923 in Pantin, France and who amalgamated in 1963 with SEV, were, in the middle of the Thirties, the first company to market large diameter headlamps and there was a 220mm diameter

headlamp that could be fitted to the Traction 11A.

These 'Aerolux' headlamps are chrome on brass with a crest stamped on the headlamp shell.

There is a standard version which has a flat glass lens and the

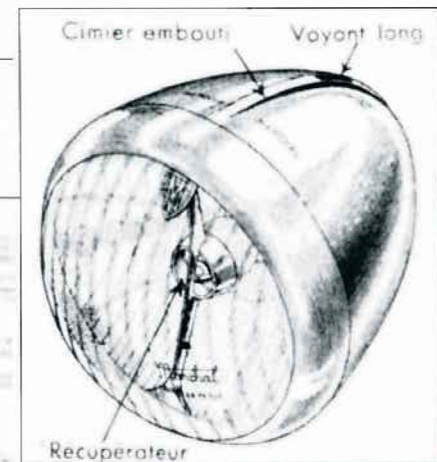


top of the range 'Strilux' which has a patented polished vertical light reflector, improving the beam, fitted from the top bottom across a striated reflector. [2]

Following the aerodynamic theme, from the 1935 Paris Motor Show Marchal introduced convex lenses, again with the patented light reflector but different brass reflectors. This is the famous "Equilux" available as either the 220mm diameter ABTP 335 or the 240mm diameter 347, each having a flat red glass telltale

3] Marchal Aerolux 335 with embossed crest.

2] 1935 Marchal headlight with flat lens. The visor fixed between lens and the lining enabling a better beam.



indicator for the sidelights.

From the 1935 Paris Motor Show these lamps have new shells and a removable crest. The red telltale is integral to the crest and is now rectangular with a rubber gasket giving rise to a range of

logue there were similar 200mm diameter [11B1 and 7C] headlamps with a 190mm ABTP 360 lens and a 185mm curved reflector. This headlamp is very rare ~ indeed no example has ever been seen! [15]

The term 'Equilux' appears  
Continued on  
page 30

Equilux headlamps. [3 to 6]

These all chrome lamps could be seen on many an 11B before the war and many 15 SIXES to the mid-1950s. [7 to 14]

In the pre-war Marchal cata-

Below, top to bottom:

7) Equilux shell, glass telltale.

Later plastic.

8) Equilux 335 optic and shell.

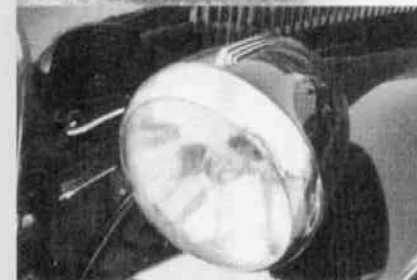
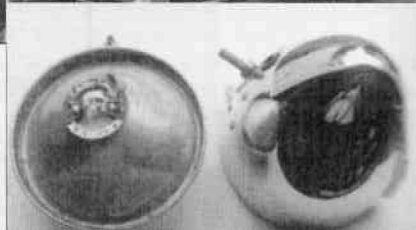
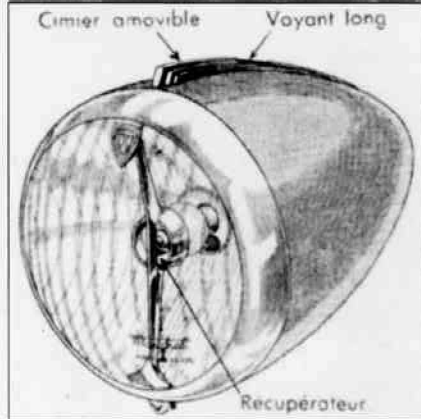
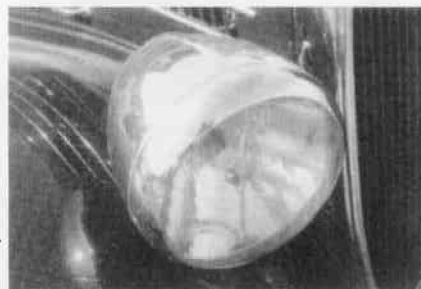
9) 240mm Equilux headlight [347 lens].

Left, top to bottom:

4) Marchal Aerolux with embossed crest on the headlamp shell.

5) Marchal Equilux 335 with removable crest.

6) The removable crest [from 1938] with telltale and its rubber seal.



Left, top to bottom:

10) 240mm Equilux headlights on a 15G.

11) Enamelled version of the Equilux headlight.

12) Rare pre-war long-range Equilux [original equipment on Delahaye, Berliet and Voison in 1939].

13) 335 light units [optics] were often assembled on special bodies like this Splendilux.

14) Enamelled 200mm Marchal headlamp with crest on an 11.

Below:

15) The 1949 Paris Motor Show Marchal range.





Continued from page 28  
in the 1951 Marchal catalogue  
and the word is embossed in the  
lens to the left of the ABTP type  
approval mark [435 series for the  
11CV].

At the 1951 Paris Motor  
Show new 220mm and 240mm  
diameter headlamps replaced  
the old references and had semi-  
convex lenses [ABTP 436A and  
436], new silver metal reflectors  
with a reduced diameter bulb  
holder, a different vertical alumin-

ium light reflector [which bent  
towards the lens, not away from  
it as in the previous models] and  
the red telltale in plastic, which  
aged badly. [16 to 18]

200mm headlamps were fac-  
tory fitted to the 11CV, the optical  
reflector equipped with Equilux  
ABTP 435 lenses.

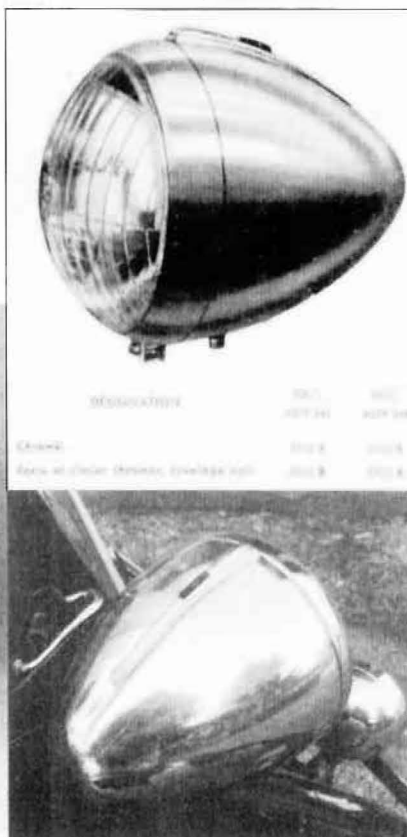
The enamelled shell with  
chromed rims and telltales ex-  
isted from 1939 [on the Amilcar  
Coumpound and the last post-  
war Simca 8-21200], 200mm  
diameter for the 7C and 11BL with  
standard Marchal optics [identi-  
cal to the factory fitted ones] with  
ABTP 391 lenses from late 1938  
to March 1951 and Equilux 435  
[March 1951 to April 1953] and  
Equilux 478 [April 1953 to July  
1957], the latter two also feature  
new silver metal reflectors, which  
are fragile over time, a smaller  
bulb holder and a red plastic

telltale. [19]

#### CIBIÉ

Cibié, established in 1919  
in Aubervilliers and the largest  
French producer, marketed after  
the war more luxurious versions  
of headlamps that had enamel or  
chrome shells, fitted with crests  
and red rectangular telltales  
[205 mm diameter for the 11,  
also fitted to the Simca 8-1200,  
and 218mm diameter for the 15  
Six]. The optics [light units] were  
identical to the original equip-  
ment [lenses being the ABTP

20 & 21] Cibié chrome headlight  
with crest and glass telltale.



## LIGHTING THE WAY



Above

16] The 1950 Paris Mo-  
tor Show Marchal range.  
Above right:

17] The 1951 Paris Mo-  
tor Show Marchal range with  
the new Equilux 436 head-  
lamps and the 640 fog lamp.  
Right:

18] New light units appeared in  
1951 on the Equilux headlight  
[Equilux ABTP 436A and 436  
lenses.



349 then 349Z and 500 for the 11 and 348 for 15 Six]. Cibié designed quartziodine headlights in 1962. [20 to 22]

#### DUCELLIER

Ducellier, founded in 1830 making lanterns for horse drawn

diameter shells [black for Citroën and chrome as an accessory]. The lens used was the ABTP 354 then the Isoroute 115.

#### AUTEROCHE

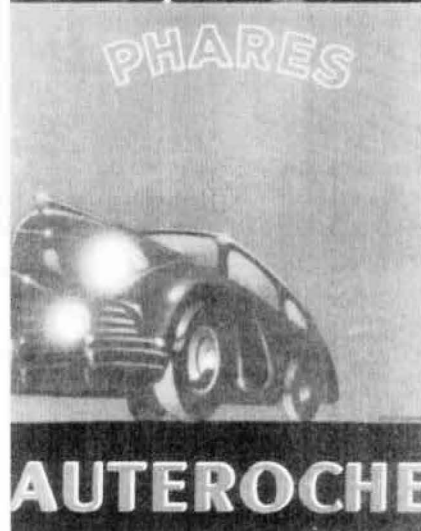
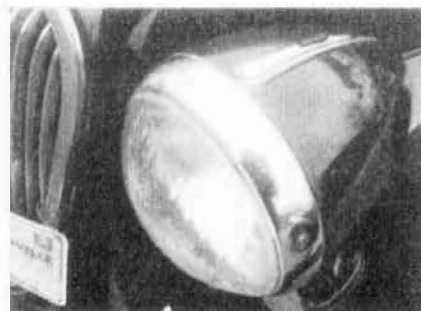
Auteroche, a hackney carriage lantern maker, formed in 1875

was the oldest lamp manufacturer in the world and created the

acetylene lamp. The brand has filed numerous patents including the directional beacon in 1908 but never supplied headlamps to Citroën as original equipment for the Traction.

Auteroche marketed enamelled and chromed headlamps that could be used [200mm diameter with the ABTP 404 lens, the 220mm diameter with the ABTP 400 being the most common].

24] The Auteroche range of additional headlights.



AERODYNAMIQUE (Glace bombée)

Diamètre en mm	Numéro d'accessoire	Ensemble chrome latéral	Ensemble chrome latéral
160	420	261	261 bis
200	404	425	425 bis
220	400	446	446 bis

Their headlamps were superior to those of the three other brands that supplied Citroën, the brass shells were thicker and the reflectors and chrome being of higher quality.

Headlight shells semi-processed into the wings changed the aesthetics of the Traction. The rationale being better lighting and its adjustment, and an aesthetic modernisation of the car.

The enamelled 'Phare Encastré' [embedded headlight] was intended to use rims from 203 to 206mm and therefore were probably Cibié.

#### EUROPEAN CODE HEADLAMPS



Traffic conditions changed and evolved with the popularisation of the car after the war. This growth prompted an evolution in lighting technology that was conducted in two stages during the Fifties and which benefited the

Traction to the end of its life. The equipment suppliers improved the diffusion of the headlamp beams with new lenses [Marchal was the first with the Equilux in March 1951] then adopted the 'European Code System'.

This evolved in France [increasing the beam range from 20 30metres]. In 1955 new light units [optics] could thus replace those of the original headlamps of the three original suppliers to Citroën by retaining the headlamp shells.

Cibié marketed a 200mm lens that was crimped onto the reflector [similar in design to the ABTP 500 that appeared in June 1955, factory equipped on the Traction] with type approval reference E2 105 [without the letters ABTP]. These could be fitted on the 11cv and 15 Six. A different rim is needed ref. 205 [11cv] and 208 [15 Six] to fit the headlamp shells.

There is another more recent model [E2 169-1465] with four external mounting points which if cut off will fit the original 205mm shell, of if kept to will fit the 218mm 15cv shells by the use of an adaptor.

Marchal produced various light units [optics] with lenses crimped onto reflectors which fitted the original 200mm headlamp shells [lens ref. Equilux E2 109-1412, ABTP 478 NL identical to the original 478 assemblies, ABTP 527-1409, ABTP 447...][26] To fit these 200mm

optics to the Cibié and Marchal 15 Six headlamp shells a crown adaptor is used to fit them onto the original rim used with the 220mm shell. [27]

#### ADDITIONAL LAMPS

To improve the lighting of the

[the fog lamps and long-range lamps of each manufacturer having enamelled or chrome shells] then rectangular or oval at the beginning of the Fifties.

#### FOG LAMPS [ANTI-BROUILLARD]

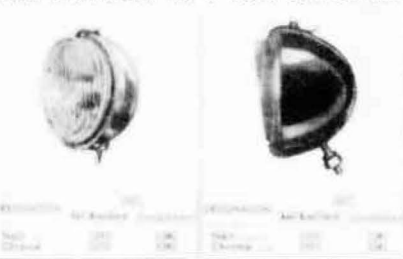
The 'virages-brouillard' was used on its own or was coupled

with dipped headlights. [28, 29] Cibié marketed them with flat lenses [diameters of 160 and 130mm] from 1937 for 15 years., then from 1952 new models of 135mm diameter and more modern rectangular shapes. [30]

29] Cibié fog lamp and complementary spot light appeared before the war.

30] The Cibié rectangular fog light of 1952.

#### ANTI-BROUILLARD 130 & 160 & COMPLEMENT



Marchal had a cylindrical model in 1935 which was used by François Lecot for his 400,000km endurance run. Marchal created the famous 160mm diameter 630 in 1937, a 135mm version in 1949 [640 and 641], a rectangular model in 1952 [650 Rectilux, 170 x 88mm enamelled or chrome] and the Fantastic with diameters

of 135mm [670/680/690 and 670/680] and 175mm [660] in

Below, top to bottom

33] The Marchal Fantastic fog lamp, showing the central extruding point.

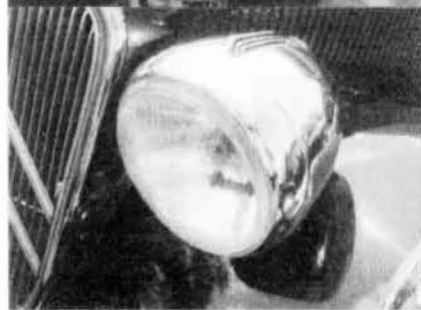
34] Auteroche fog lamp brochure.

35] Ducellier brochure depicting the 135mm VB 10 and the 150mm VB 8.

36] Bosch brochure showing the 130 and 150mm [LE/NE 130 and 150].

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Traction, the equipment suppliers marketed supplementary lamps before the war ~ initially round



Top  
26] Marchal European Code optic fitted to an original 11 shell. Centre  
27] Marchal European Code optic fitted to a 220mm shell using the crown adaptor. Bottom  
28] 1935 Marchal fog lamp.



#### LES "FANTASTIC" MARCHAL



1953. These lenses have a central extruding point.

Auteroche made 135mm and 160mm diameter fog lamps, oval [170 x 90mm] 495 appeared at the 1952 Paris Motor Show and then in 1955 the 135mm Bifocal.

160mm.

Ducellier ~ 135mm [LP 10] and 150mm [LP 8].

Bosch ~ the flat glass 120mm in 1935 then 130 and 150mm [LE/EF 130 and 150].

Many Tractions and particularly 15 Sixes had a fog and spot lamp fitted at the time.

#### THE DIRECTIONAL LAMPS

The hand operated directional models manipulated from outside or inside were marketed by Auteroche [135mm diameter] [37] and Marchal with their Girophare [Rotating Lamp] model '90' which has a suction cup and bakelite body and a 5metre extension cord also making it a portable lamp [baladeuse] and the Model '91' with a chrome exterior.

38] The extremely rare directional 'Pivophare' manually operated from the steering wheel.



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[33 to 35]

#### DRIVING, LONG RANGE [LONGUE-PORTEE] LAMPS AND SPOTLIGHTS

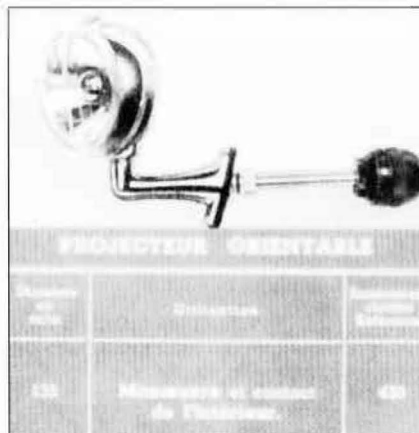
The 'grande portee' [greater or longer range], also called supplementary lights, were sold by all manufacturers.

Cibié in 130 and 160mm diameters.

Marchal with the 160mm 632 in 1937 and 135mm 642 in 1951. The Fantastic in 1953 was 135mm and in 1962 the quartz iodine 175mm 662.

Auteroche ~ 135 and

37] The directional Auteroche 135.

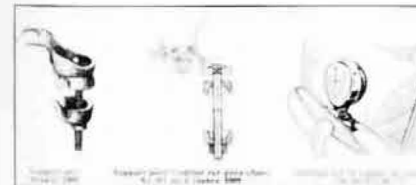


The 185mm diameter chrome onbrass Pivophare Raymond [38] was fixed to the front bumper and its beam could be rotated 90° to the left or right from the steering wheel. It was marketed by the Citroën Centre on the Boulevard Voltaire in Paris.

#### BUMPER SUPPORTS OR MOUNTS

These additional lights were mostly attached using claw pinching supports on the Traction bumper irons or bumper supports [Marchal K5, Cibié 4362, Ducellier 5009, Auteroche 121, EB type 30]. The upper part which takes the threaded rod is made of aluminium [polished or painted in black] to metal [chrome or painted black]. [39]

39] One of the many types of bumper supports ~ this from Ducellier.



#### REVERSING LIGHTS

Reversing lights [feux de recul or feux de marche arrière] were marketed by Cibié [95mm diameter in chrome with an orange lens], Marchal [the 90mm diameter 520 [40] in October 1951, chrome with clear or orange lenses having a resemblance to the 640 fog lamp], Ducellier [the R8 black casing, 135 and 150mm diameters with a red lens], Aute-



40] Advertisement for the Marchal 520.

roche [95mm diameter or 155 x 90mm oval in black or chrome] and Bosch [rectangular black or chrome].

Models with an orange lens were sometimes used as indicators [feux clignotants]. I have used a clear lens Marchal 520 as a rear fog lamp by painting the of the lens with red glass paint. [DH].

#### OVERRIDERS

There were overrides [butoirs de parechocs] with red reflectors and/or integrated stop lights: SDAA with Scintex lights [also available with front light and indicators], Maire and Robri made them to fit the profile of the 11CV and 15 Six bumpers [available with red or white reflectors]. [41 & 42]

#### REAR LIGHTS

After the war the equipment



manufacturers offered special editions for rear lighting on the Traction.

The lamp and registration number plate mounted on the left rear wing of the small boot models could be fitted with different

pair of lamps for the rear wings. These had three bulbs and were multifunction [tail light, brake light, reflector, indicators and a mounting plate for the left rear wing].

The Seima lamps fitted as original equipment on the post-July 1952 big boot models could be replaced by the 'Domino' lamp made by Labinal. It had a lens with a chrome surround and the shell of the lamp could be painted to match the body colour.

43] The Auteroche GH with integrated reversing light. Dismounted it can be used as a portable lamp.

#### ÉCLAIREUR DE SECOURS "GH"



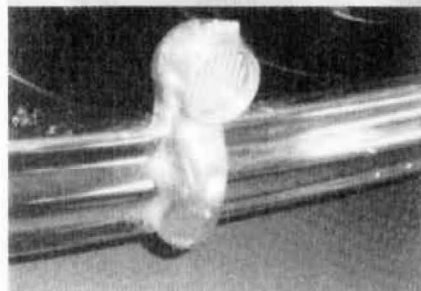
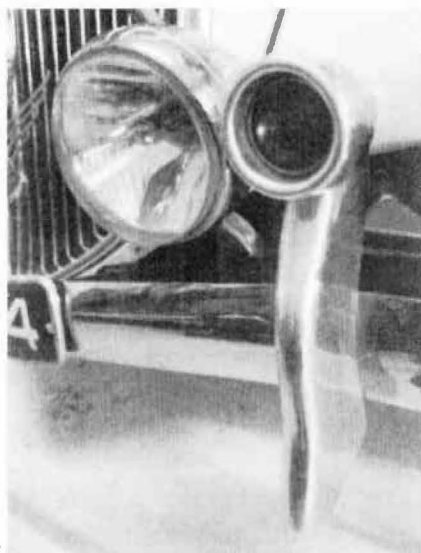
Le modèle "GH" est une lampe de secours à lumière blanche, à montage facile, qui peut être utilisée comme lampe de poche ou comme lampe de secours. Elle est équipée d'un interrupteur à levier et d'un réflecteur en aluminium. Elle est disponible en deux versions: avec ou sans réflecteur. Les prix sont indiqués ci-dessous.

Typ 60751	avec réflecteur	kr. 120
Typ 60752	sans réflecteur	kr. 100
Typ 60753	sans réflecteur	kr. 120

## LIGHTING THE WAY

lamps [Seima, MAD, Auteroche] instead of those originally fitted [Neuhaus and Harpon], which was the only lighting required.

After the war Scintex developed the 'Damier' product ~ a



Right, top to bottom:  
41] SDAA overrides lamp with indicators.  
42] Robri reflector on a 15 Six.

Equillux-ljuset ger Eder samma säkerhet på natten som på dagen, även vid höga hastigheter och våt vägbanor.



Det avbländade Equillux-ljuset ger genom sin markanta avgränsning i höjled såväl Eder som den mötande absolut säkerhet.

## MARCHAL Equilux



### Fjärrstrålkastare

har en mycket lång räckvidd med ringa spridning. Monteras så lågt som möjligt. Finns i två storlekar, och levereras komplett med hållare och ett glödlampa 6, 12 eller 24 volt.  
Typ 642 300, glöddiameter 120 mm, helt förkromad, kronor 65.  
Typ 622 300, glöddiameter 140 mm, helt förkromad, kronor 70.

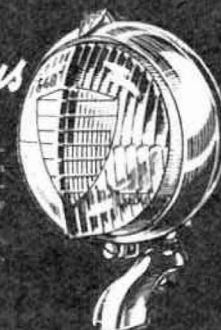


### Backlykta

helt förkromad och försedd med fläsvinkel och glödlampa.  
Typ 320 300 gult glas, diameter 60 mm, kronor 24.  
Typ 320 122 vitt glas, diameter 60 mm, kronor 24.

### Dim- och kurljus

med dubbelreflektor, ger ett homogent och i sidled mycket utbrett strålkänne, som starkt belyser diket och den närmaste terrängen. Finns i två storlekar, svart eller förkromad, och levereras komplett med hållare och selektiv glödlampa 6, 12 eller 24 volt.  
Typ 640 300, glöddiameter 120 mm, helt förkromad, kronor 65.  
Typ 630 300, glöddiameter 140 mm, helt förkromad, kronor 70.



A.-B. BIL-AERO ELECTRIC