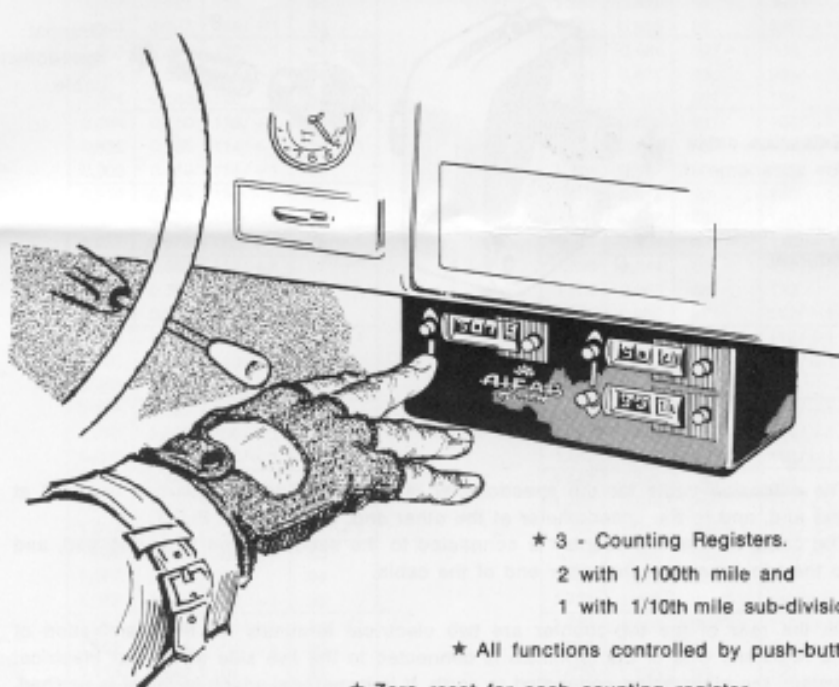


# AI-FAB

*Gemini*

## TRIP-COUNTER



- ★ 3 - Counting Registers.  
2 with 1/100th mile and  
1 with 1/10th mile sub-division.

★ All functions controlled by push-buttons.

★ Zero reset for each counting register.

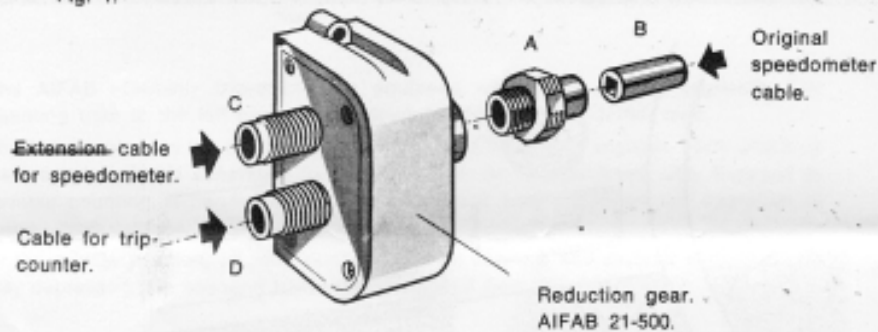
★ Forward and reverse counting facility on all three registers.

- ★ Handy size: easy mounting, 6.5 in. x 2.55 in. (166 mm x 65 mm).
- ★ All digits illuminated indirectly.
- ★ Indispensable for survey and rally work.
- ★ Accuracy of reading to 0.5 per cent with correct drive gear train.

The AIFAB «Gemini» equipment consists of a trip-counter, reduction gear and connecting cables for the speedometer and trip-counter.

The trip-counter is installed either on or under the instrument panel, or in the glove compartment, using the four holes with 3 MG thread. ~~The original speedometer cable union nut is unscrewed, the reduction gear box being mounted such that the cable is disposed in large-radius curves, thus avoiding wavering of the speedometer cable. (See Fig. 1.)~~

Fig. 1.



The ~~extension~~ cable for the speedometer is connected to the gearbox union C at one end, and to the speedometer at the other end, as shown in Fig. 1.

The cable for the trip-counter is connected to the second union D at one end, and to the trip-counter at the other end of the cable.

On the rear of the trip-counter are two electrical terminals for the illumination of the registers. One of the terminals is connected to the live side of the car electrical system, the other being connected to earth. It is immaterial which terminal is earthed, as both are insulated from the frame.

~~To ensure that the drive cables always run in smooth large-radius curves, and to adapt the equipment to all types of car, both extension cables should be cut to appropriate lengths. Different speedometer union threads and drive union diameters can be accommodated.~~

The different types of standard accessories and the corresponding AIFAB Part Number are as shown in the Tables.

**2****EXTENSION CABLES**

Speedometer Thread		Square Dimension	Length	AIFAB Part No.
M 12 x 1	Male	2,6 mm (0.1025")	5 feet	20-500-007
M 12 x 1	Male	3,0 mm (0.1182")	5 feet	20-501-007
M 16 x 1	Male	2,6 mm (0.1025")	5 feet	20-502-007
M 18 x 1,5	Male	2,6 mm (0.1025")	5 feet	20-503-007
5/8" x 18	Male	2,6 mm (0.1025")	5 feet	20-504-007
3/4" x 20	Female	2,6 mm (0.1025")	5 feet	20-505-007

**3****TRIP-COUNTER CABLE**

Length	AIFAB Part No.
5 feet (1500 mm)	20-506-008

**4****GEARBOX**

Adaptor A, Fig. 1, ~~can be supplied with the following standard threads, matching the original speedometer cable:~~

Thread Size	AIFAB Part No.
M 12 x 1 Male	<del>21-500-001</del>
<del>M 16 x 1 Male</del>	<del>21-500-002</del>
<del>M 18 x 1,5 Male</del>	<del>21-500-003</del>
<del>5/8" x 18 Male</del>	<del>21-500-004</del>
<del>3/4" x 20 Female</del>	<del>21-500-005</del>

Driving Pin B, which has a square hole in both ends, can likewise be supplied in the following types, matching the original speedometer cable:

Square Dimension	AIFAB Part No.
2,6 mm (0.1025")	21-500-025
<del>3,0 mm (0.1182")</del>	<del>21-500-026</del>

**5****MAINTENANCE**

The ratio of the gearbox is fixed 1:30; because of this a low rotation speed is achieved for the trip-counter cable, prolonging the lifetime considerably and reducing cable noise to a minimum. All bearings in the gearbox are self-lubricated, but periodic cleaning and re-lubrication of the gear-wheels with grease is recommended. The trip-counter is illuminated by 2 lamps connected electrically in series.

It is therefore necessary that both lamps have an equal power rating to obtain uniform illumination.

**Only** the following lamps are to be used:

6 - Volt power system: 2 lamps	AIFAB Part No. 12-700-300
12 - Volt power system: 2 lamps	AIFAB Part No. 12-700-301

**6****HOW TO ORDER**

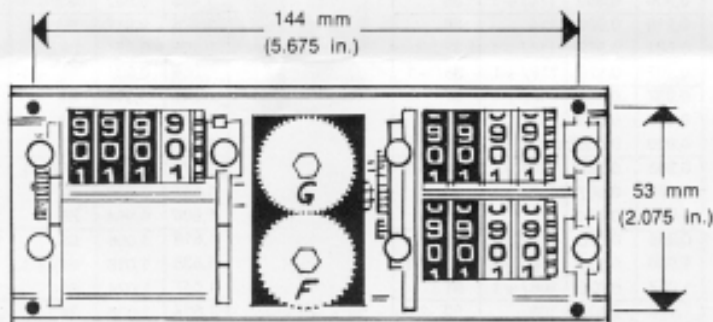
To ensure that the AIFAB «Gemini» equipment exactly fits your car, please state the following when ordering:

1. Make and type of car, year and battery voltage.
- ~~2. Part number of extension cable, trip-counter cable, Adaptor A and Driving-pin B (See Fig. 1).~~
3. If possible, the exact «road-factor». The road-factor «W» is the number of revolutions the speedometer cable makes per metre or 1/1000th of a mile of car movement. State whether mile or km calibration required.

**7****ADJUSTMENT**

If, after first mounting the AIFAB «Gemini» a difference between the counter indication and the driven distance occurs, the probable cause is a different size of tyre. As the AIFAB «Gemini» is equipped with easily changeable gear-wheels, the problem is easily overcome by inserting new drive gears. To obtain corrected gears, drive a distance of exactly one mile or one kilometre, state the reading on the registers and return the original gears for replacement.

Fig. 2.



The two gear-wheels F and G are made easily accessible by pulling off the plastic casing.

Gear-wheel changes can be effected very quickly without use of tools as the centre-distance is fixed and each gearwheel only requires pushing on to its hexagonal driving-pin.

**NOTE:** It is important that the wheel marked F is mounted first.

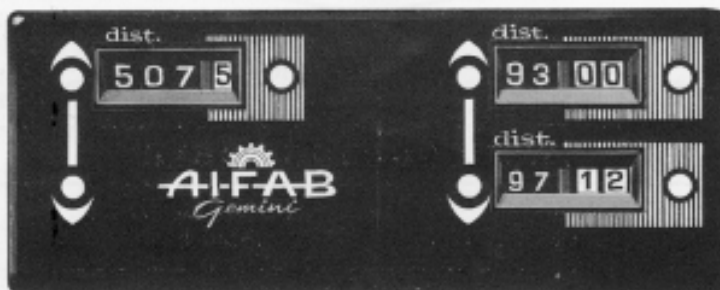
In the case of a change of car, the AIFAB «Gemini» equipment can easily be mounted in a car of another make and type. New parts for modification would be maximally the following: ~~Extension cable, Trip-counter cable, Adaptor A, Driving-pin B,~~ possibly new gear-wheels, and lamps if the battery voltage is different.

Usually it is not necessary to change all the parts.

type 120	type 75	Gearwheel F	Gearwheel G
0,752	0,467	122/+1	76/+1
0,762	0,473	122/+1	77
0,772	0,480	122	78
0,778	0,483	121	78/+1
0,784	0,488	120/+1	78/+1
0,794	0,494	120/+1	79
0,804	0,500	120	80
0,815	0,506	120/+1	81
0,818	0,509	118/+1	80/+1
0,828	0,515	118/+1	81
0,839	0,521	118	82
0,849	0,527	118/+1	83
0,853	0,530	116/+1	82/+1
0,864	0,537	116/+1	83
0,874	0,543	116	84
0,884	0,550	116/+1	85
0,889	0,553	114/+1	84/+1
0,900	0,559	114/+1	85
0,910	0,566	114	86
0,921	0,572	114/+1	87
0,927	0,576	112/+1	86/+1
0,937	0,583	112/+1	87
0,948	0,589	112	88
0,959	0,596	112/+1	89
0,965	0,600	110/+1	88/+1
0,976	0,607	110/+1	89
0,987	0,614	110	90
0,998	0,620	110/+1	91
1,006	0,625	108/+1	90/+1
1,017	0,632	108/+1	91
1,028	0,639	108	92
1,039	0,646	108/+1	93
1,047	0,651	106/+1	92/+1
1,059	0,658	106/+1	93
1,070	0,665	106	94
1,082	0,672	106/+1	95
1,091	0,678	104/+1	94/+1
1,102	0,685	104/+1	95
1,114	0,692	104	96
1,125	0,699	104/+1	97
1,136	0,706	102/+1	96/+1
1,148	0,713	102/+1	97
1,160	0,721	102	98
1,171	0,728	102/+1	99
1,183	0,735	100/+1	98/+1
1,195	0,742	100/+1	99
1,207	0,750	100	100
1,219	0,758	99	100/+1

type 120	type 75	Gearwheel F	Gearwheel G
1,231	0,765	98/+1	100/+1
1,243	0,773	99	102/+1
1,256	0,781	98	102
1,269	0,789	97	102/+1
1,282	0,797	96/+1	102/+1
1,294	0,804	97	104/+1
1,307	0,812	96	104
1,321	0,821	95	104/+1
1,335	0,830	94/+1	104/+1
1,346	0,837	95	106/+1
1,361	0,846	94	106
1,375	0,855	93	106/+1
1,390	0,864	92/+1	106/+1
1,401	0,871	93	108/+1
1,417	0,880	92	108
1,432	0,890	91	108/+1
1,448	0,900	90/+1	108/+1
1,459	0,907	91	110/+1
1,475	0,917	90	110
1,492	0,927	89	110/+1
1,508	0,937	88/+1	110/+1
1,519	0,944	89	112/+1
1,536	0,955	88	112
1,554	0,966	87	112/+1
1,572	0,977	86/+1	112/+1
1,581	0,983	87	114/+1
1,600	0,994	86	114
1,618	1,006	85	114/+1
1,638	1,018	84/+1	114/+1
1,647	1,024	85	116/+1
1,667	1,036	84	116
1,687	1,048	83	116/+1
1,707	1,061	82/+1	116/+1
1,716	1,066	83	118/+1
1,737	1,079	82	118
1,758	1,093	81	118/+1
1,780	1,106	80/+1	118/+1
1,788	1,111	81	120/+1
1,810	1,125	80	120
1,833	1,139	79	120/+1
1,857	1,154	78/+1	120/+1
1,872	1,164	78/+1	121
1,888	1,173	78	122
1,912	1,188	77	122/+1
1,937	1,204	76/+1	122/+1

The difference between each road-factor in the columns is approximately 1 per cent.



The AIFAB »Gemini« trip-counter is equipped with three counter registers. The counting train to the left can be read down to 100-metres or 1/10th mile.

The two counters to the right have a 10-metre or 1/100th mile register. Each counting train can be zeroed separately by a push-button on its right-hand side. Forward or reverse counting is carried out by the instrument simply through the operation of further push-buttons.

In the middle position, i.e., the push-buttons for forward and reverse counting half-way depressed, the counting trains are uncoupled from the drive.

Manufacturer:

**A**ifab<sup>A/s</sup>, copenhagen

Distributor: