

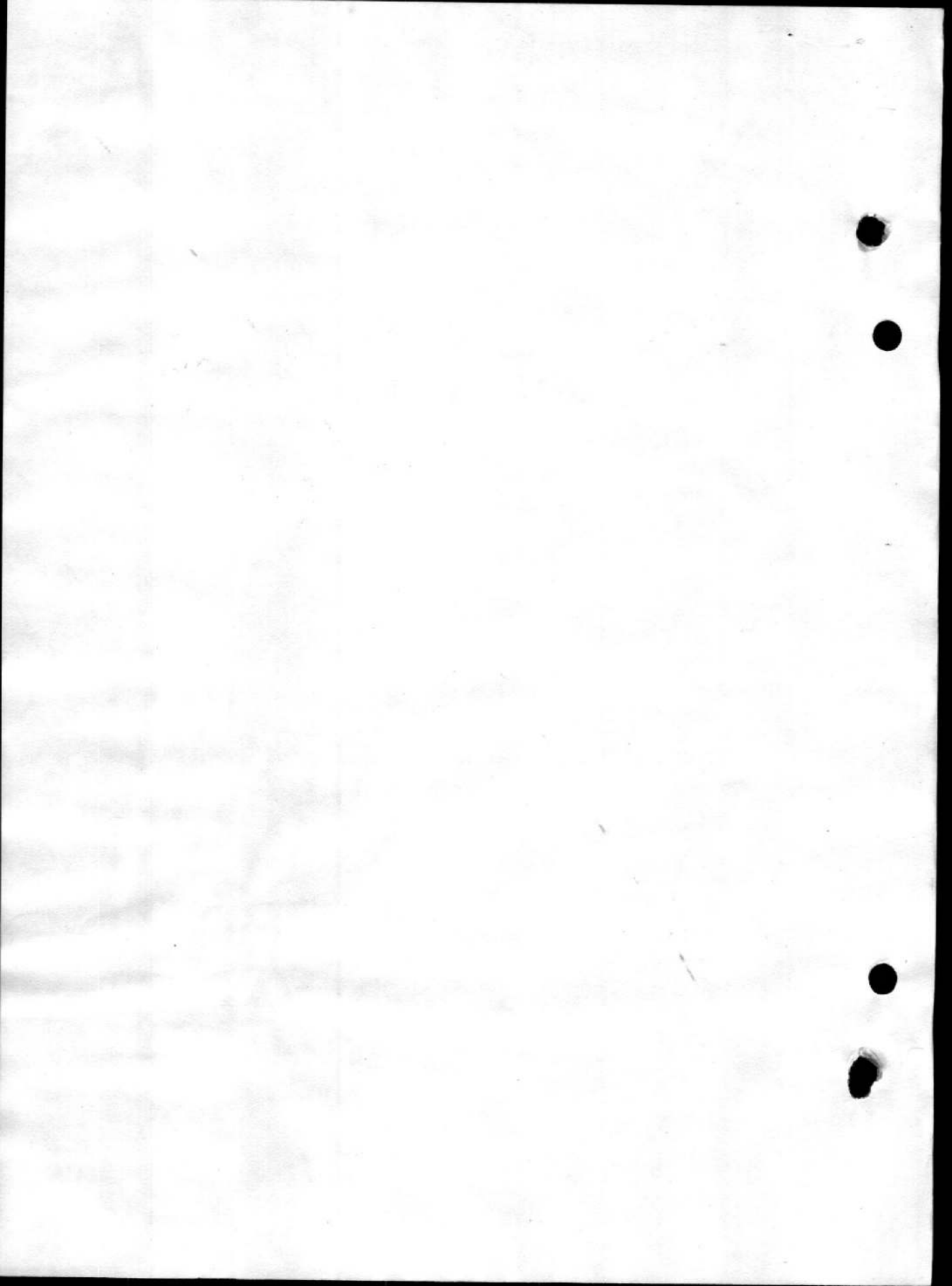
## SECTION 13

## MECHANICAL TRANSPORT SERVICING EQUIPMENT

## LIST OF ITEMS

Now AP 119A-1000-  
Book Sect Item

		Now AP	119A-1000-	
		Book	Sect	Item
▶ 1	Deleted			
2	Kit, dent removing	1G	1	1
▶ 3	Deleted			
4	Gauge, wheel alignment, Dunlop Type A.G.10	1G	1	2
5	Vulcaniser, Stenor, Dart model	1G	1	9
6	Nozzle, testing outfit	1G	1	3
7	Jack, lever, hydraulic, 10 ton	1G	2	1
8	Jack, lever, hydraulic, 5 ton	1G	2	2
9	Extractor, set universal	1G	1	10
10	Stands, axle, for M.T. vehicles	1G	1	12
▶ 11	Deleted			
12	Deleted			
13	Lubricator, trolley mounted	1G	1	4
15	Jack, lifting, hydraulic, 4 ton	1G	2	3
16	Jack, lifting, hydraulic, 8 ton	1G	2	4
17	Jack, lifting, 1 ton, screw	1G	1	11
▶ 18	Deleted			
20	Bar, towing, rigid, light	1G	2	8
21	Bar, towing, rigid, heavy	1G	2	7
23	Machine, sparking plug cleaning, Champion, Model F.800X	1G	1	5
24	Changer, tyre, Type A	1G	1	7
27	Kit, valve seat grinding, Type A	1G	1	6
28	Changer, tyre, heavy duty	1G	1	8
29	Sling, universal, for M.T. engines	1G	2	6
▶ 30	Deleted			
31	Jackcrane, 30 cwt., M.T. engine removal	1G	2	5
32	Bar, towing, heavy duty	1G	2	9
33	Tools, repair, tubeless tyres	1G	1	13
34	Master meter (Refuelling vehicles)	1G	1	14



## UNIT, SERVICING, M.T. HYDRAULIC BRAKES



A.P. Reference 1464E

Ref. No. 16C/6290

**Overall dimensions**

Height 1 ft 10 in

Width 9 in

Weight 14 lb

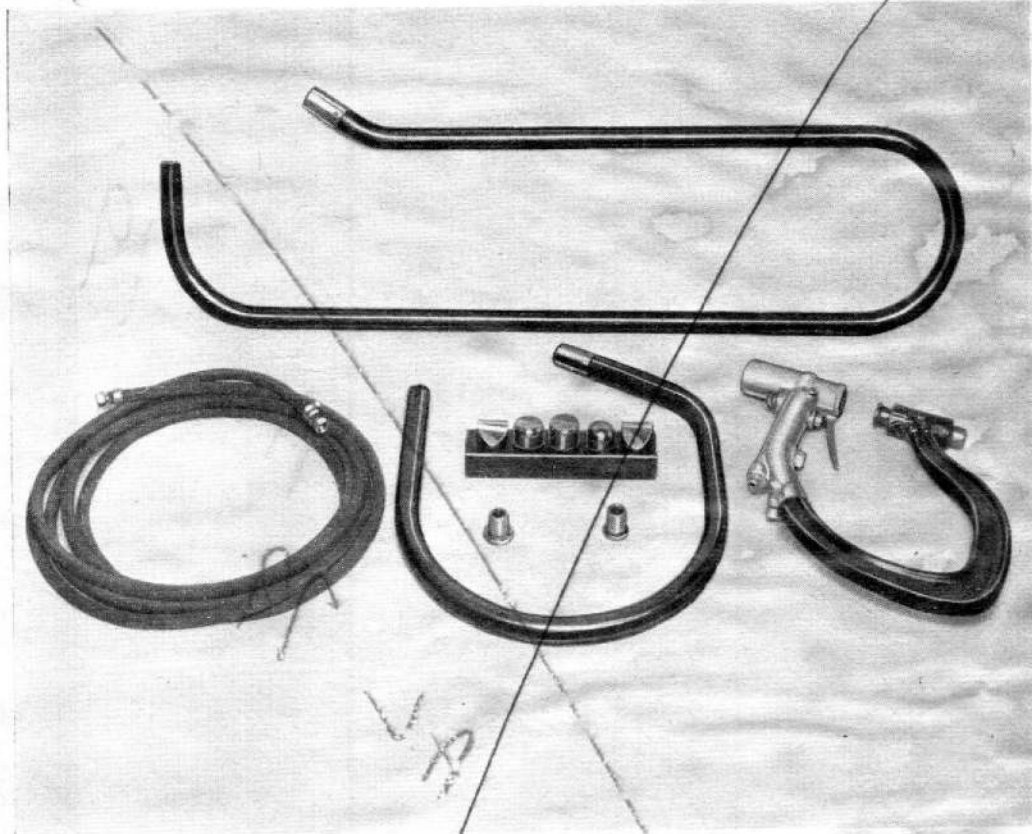
Accessories (A) 16C/6456 Cap,  $\frac{3}{8}$  in master cylinder  
 (B) 16C/6460 Cap,  $\frac{1}{2}$  in master cylinder, male thread  
 (C) 16C/6457 Cap,  $1\frac{1}{4}$  in master cylinder  
 (D) 16C/6458 Cap,  $2\frac{1}{2}$  in master cylinder

Classification 2

**Brief description** This portable unit is used to facilitate the servicing of M.T. hydraulic brakes, and other hydraulic systems such as used in fork lift trucks, and allows the system bleeding and flushing operations to be performed by one man. The unit consists of a cylindrical air container with a separate inner container for brake fluid. The air container can be pressurised by a built-in hand pump. A length of hose and caps of various sizes, listed above, are provided for connecting the unit to the master cylinder of the vehicle hydraulic brake system. ◀ Item 12 (Pump hand lift) can be used to transfer hydraulic fluid from a drum into the fluid container. ▶ The unit is designed so that no air can pass into the vehicle system should the supply of fluid in the container become exhausted during operation.

ITEM 2

# KIT, DENT REMOVING



AC76

A.P. Reference Data book only

Ref. No. 16C/4619

Classification 3

Overall dimensions (packed)

Length 3 ft 8 in

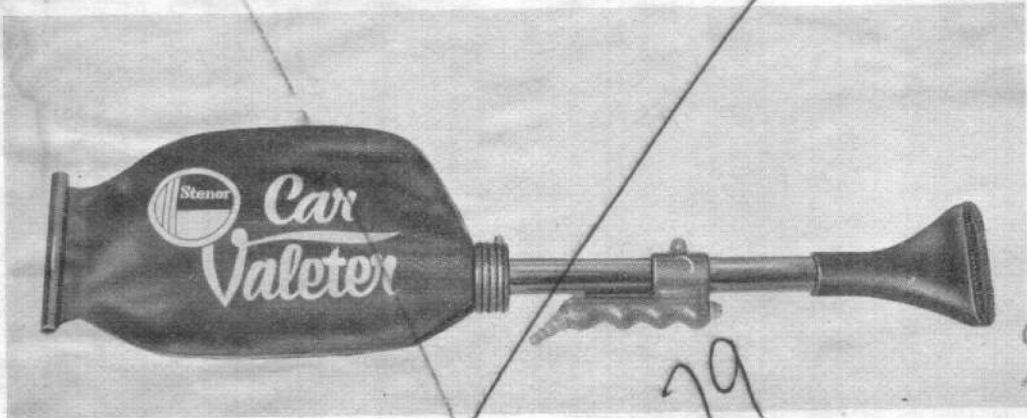
Width 1 ft 6 in

Height 6 in

Weight 43 lb

**Brief description** This kit is used to remove dents from mudguards and body panels. It consists of a pneumatic hammer, three frames, a 20 ft. length of rubber hose, and a set of dies. The hammer, which can deliver up to 4,000 blows per minute is operated by compressed air at 125 to 150 lb/in<sup>2</sup>.

ITEM 3

**CLEANER, CAR INTERIOR (AIR-OPERATED)****A.P. Reference**

Ref. No. 16C/6482

Classification 3

**Overall dimensions**

Length 2 ft. 6 in.

Length of bag 1 ft. 2½ in.

Depth of bag 8 in.

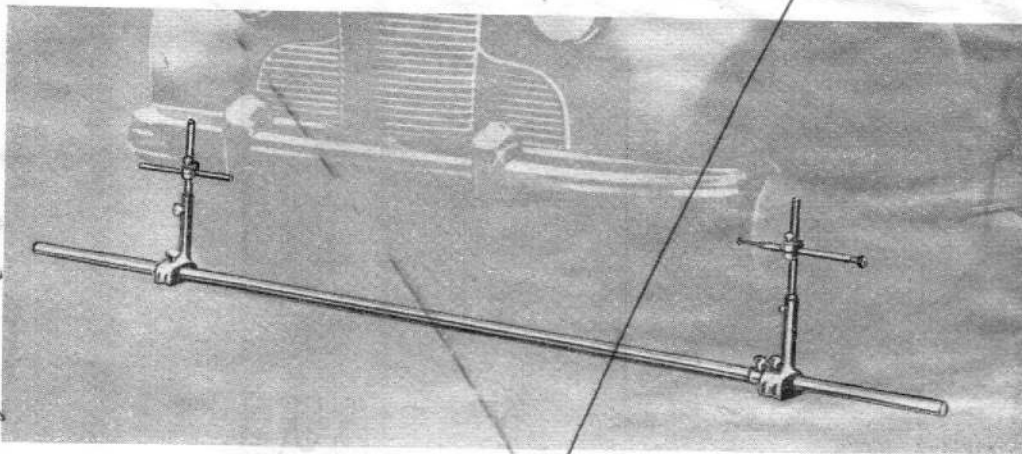
Weight 1 lb. 12 oz.

**Brief description** This hand portable suction type cleaner is used for removing loose dirt, dust, etc., from the interior of M.T. vehicles. It is of simple construction consisting of a collection bag attached to a handle assembly with a control button, rubber nozzle and air line connections; there are no moving parts. The cleaner will operate from any compressed air system where the delivery is 3-4 cu. ft. per min. and a pressure of 90 to 120 lb. per sq. in. is available; it will however provide a good suction at pressure down to 70 lb. per sq. in. The cleaner can be converted to blow out a powerful stream of air by rotating the handle a quarter of a turn on its mounting tube and removing the bag.

**RESTRICTED**

ITEM 4

## GAUGE, WHEEL ALIGNMENT, DUNLOP TYPE A.G. 10



### A.P. Reference

Ref. No. 16C/6233

Classification 3

### Overall dimensions

Length of bar 9 ft. 0 in.

Overall height 1 ft.  $8\frac{3}{4}$  in.

Height of bar  $4\frac{3}{4}$  in.

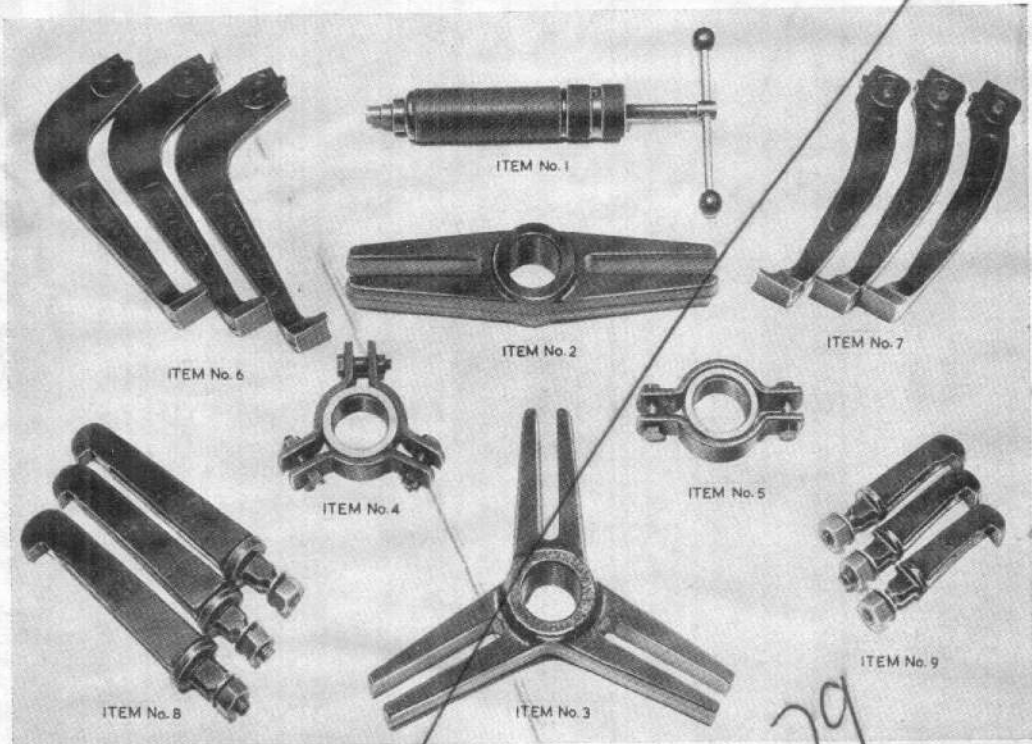
Weight 23 lb.

**Brief description** This gauge is used for checking the front wheel toe-in of M.T. vehicles. It consists of a base bar on which two base castings can be adjusted to suit the vehicle width. Mounted on each base casting is a pointer which can be adjusted so that readings can be taken against the wheel rims at centre of hub height; one pointer is plain, and the other has a spring-loaded plunger which can be pulled outwards and retained by a bayonet catch. The spring-loaded pointer has a graduated scale marked in  $\frac{1}{16}$ ths of an inch for measuring the toe-in. A locating collar can be set against the base casting and locked to the base bar to determine the original setting should it be necessary to remove the casting from the bar when moving the gauge from the rear to the front of the wheels.

**RESTRICTED**

## ITEM 9

## EXTRACTOR SET, UNIVERSAL



Comprising: —

Item No.	Ref. No.	Item
1	16C/6159	Hydraulic ram
2	16C/6160	Beam, 2-armed
3	16C/6161	Beam, 3-armed
4	16C/6437	Body, 3-armed
5	16C/6162	Body, 2-armed
6	16C/6443	Leg, Type 252A, 6 in.
7	16C/6165	Leg, Type 215, 6 in.
8	16C/6164	Leg, Type D, 5½ in.
9	16C/6163	Leg, Type A, 2¾ in.

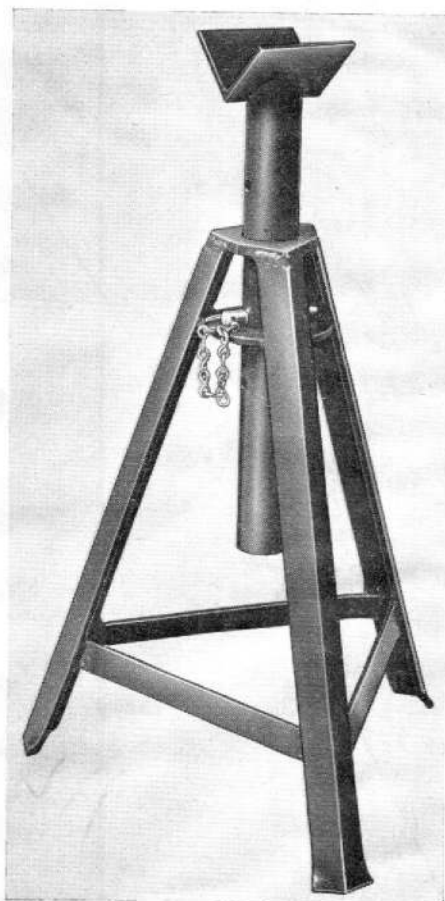
Classification 3

**Brief description** This universal extractor set is provided for general use in M.T. workshops and can be adapted for all normal extractor work on M.T. engine, gearbox, transmission and chassis units. The set includes 2-armed and 3-armed beams with 5½ in. and 2¾ in. rigid legs, 2-armed and 3-armed bodies with 6 in. hinged legs, and a hydraulic ram. The ram body is threaded for screwing into the centre of the selected beam or body, and is provided with a turn-screw for applying hydraulic pressure during extracting operations. The items can be demanded separately as required.

**RESTRICTED**

ITEM 10

# STANDS, AXLE, FOR M.T. VEHICLES



**A.P. Reference**

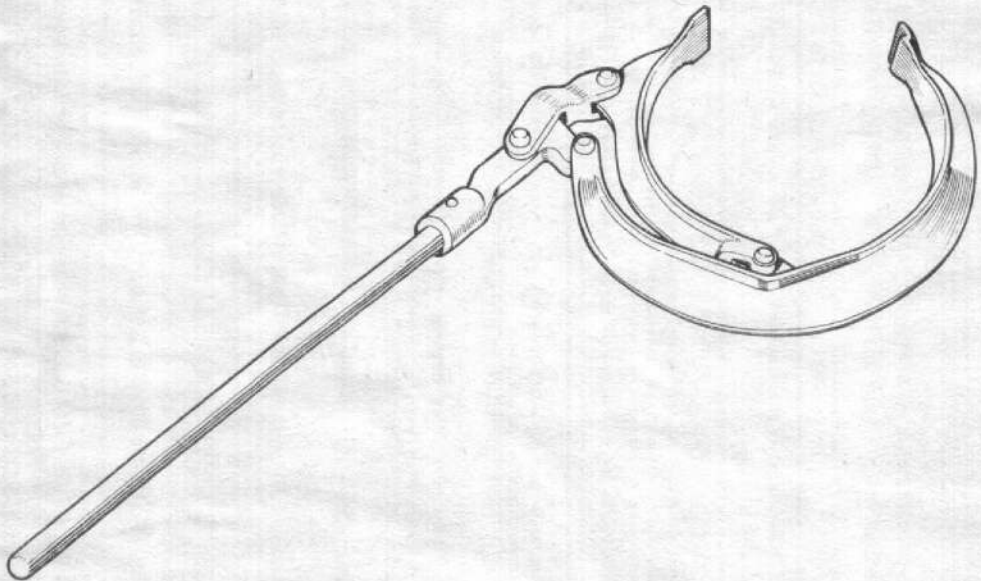
**Classification 3**

<i>Ref. No.</i>	<i>Load capacity</i>	<i>Height (closed)</i>	<i>Height (max.)</i>	<i>Weight</i>
16C/4018	2½ tons	1 ft. 0 in.	1 ft. 9 in.	13 lb. 6 oz.
16C/4663	4 tons	1 ft. 6 in.	2 ft. 6 in.	16 lb. 12 oz.
16C/6128	6 tons	1 ft. 9 in.	2 ft. 8 in.	18 lb. 9 oz.

**Brief description.** These stands are used to support M.T. vehicles clear of the ground during servicing and are normally positioned under the axles or chassis frames. Each stand consists of an all-welded angle-section tripod with an adjustable centre stem fitted with a V-shaped crutch and supported in the frame by a pin. Holes 2¼ inches apart are drilled through the stem for intermediate height adjustments. Each stand is marked to show its maximum safe load capacity. The illustration above shows the 6-ton stand.

**RESTRICTED**

## ITEM 11

**MOVER, TYRE BEAD**

**A.P. Reference** 1464E, Vol. 1, Book 2, Part 1, Sect. 9, Chap. 3

**Ref. No.** 16C/6399

**Classification** 3

**Overall dimensions**

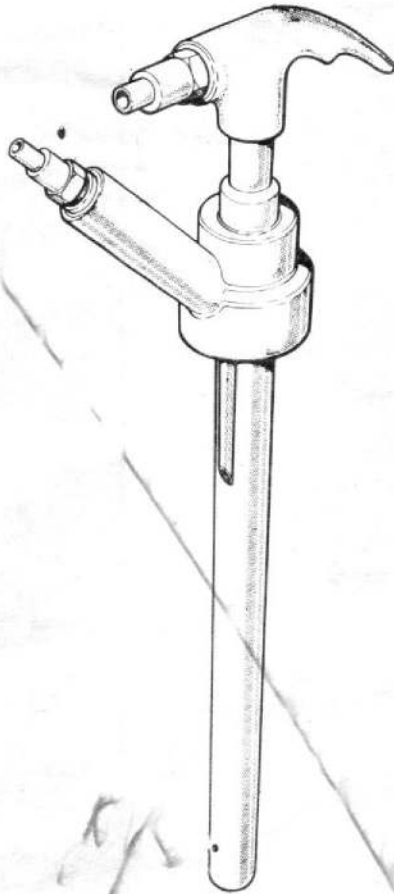
**Length** 2 ft 6 in

**Weight** 10 lb 14 oz

**Brief description** This tool is used to free beads from the wheel rims. It is suitable for light vans and passenger cars and can be used on tubeless tyres. One leg on the tool has a stepped end which is located against a rim of the wheel. The body of the tool is positioned archwise over the tyre and the foot of the small link leg is positioned against the wall of the tyre close to the opposite rim. A pull on the hand lever closes the feet together and since one foot is anchored against a rim the other foot forces the tyre bead away from the opposite rim.

ITEM 12

## PUMP, HAND LIFT



A.P. Reference 1464E, Vol. 1, Bk. 3, Pt. 2, Sect. 4, Chap. 3, App. 1

Ref. No. 16C/6709

Classification 3

Overall dimensions (approx.)

Width  $6\frac{1}{2}$  in

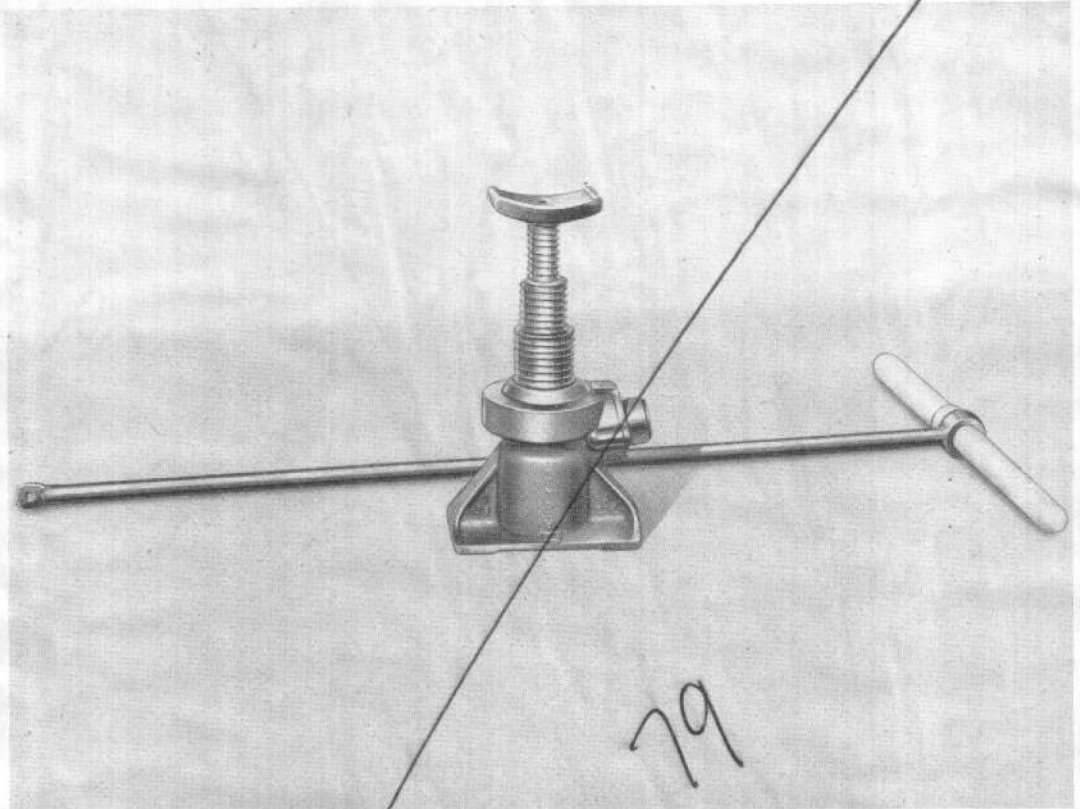
Height (with handle retracted) 1 ft 6 in

Weight  $1\frac{3}{4}$  lb

**Brief description** This hand lift pump is supplied for use with Item 1, the M.T. hydraulic brakes servicing unit by providing a means of transferring hydraulic fluid direct from a five gallon drum to the brakes servicing unit. The pump is a simple manually operated reciprocating pump with a head assembly attachment which, in use, is fitted in place of the filler cap on a standard five gallon drum so that the pump inlet valve is immersed in brake fluid. Using the hose supplied on Item 1, connection is made from the pump outlet valve on the handle to Item 1 and manual operation of the pump will result in transfer of fluid from the drum into the fluid container of the servicing unit. The pump is fitted with a drain back assembly on the head for rapid bleeding of trapped air or surplus fluid back into the drum. Connection of the hose to the pump outlet valve or drain back is made by means of a quick release bayonet coupling.

ITEM 17

## JACK, LIFTING, 1 TON, SCREW TYPE



AL  
79

### A.P. Reference

Ref. No. 16C/4005

Classification 2

### Overall dimensions

Length  $6\frac{1}{2}$  in.

Width  $4\frac{1}{2}$  in.

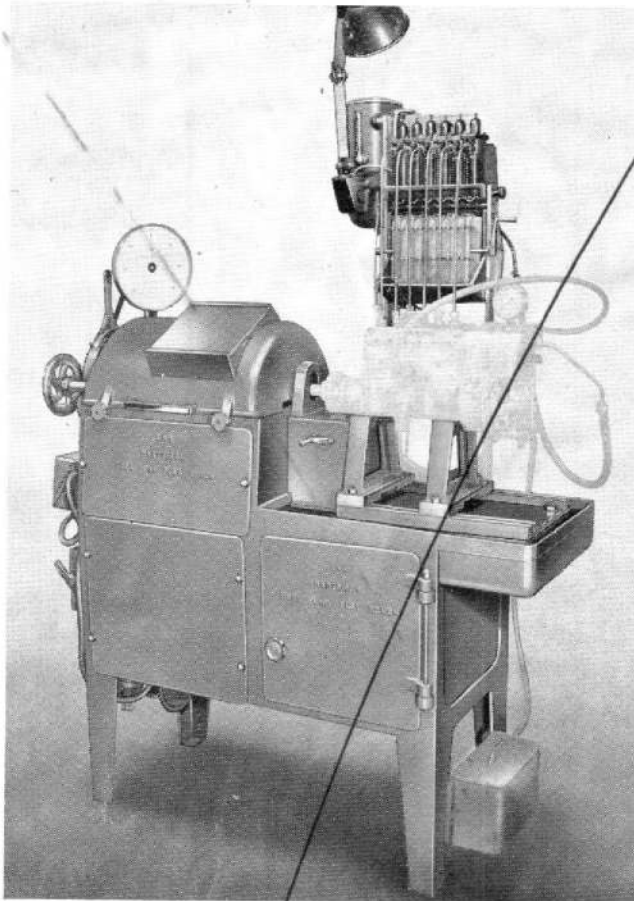
Height  $6\frac{1}{2}$  in.

Weight  $11\frac{1}{4}$  lb.

**Brief description** This jack is of the pillar telescopic screw type and is used during the servicing of light M.T. vehicles where the ground clearance is small and where a comparatively high lift is required. The closed height of the jack head is  $6\frac{1}{2}$  in. and the lift is 7 in. Maximum safe working load 1 ton.

ITEM 18

# TEST BENCH, HARTRIDGE, FOR FUEL INJECTION PUMPS



AL-79

**A.P. Reference** 1464E, Vol. 1, Part 2, Sect. 2, Chap. 2

**Ref. No.** 16C/3664

**Classification** 2

**Overall Dimensions** (packed)

**Length** 5 ft. 2 in.

**Width** 2 ft. 2 in.

**Height** 4 ft. 11 in.

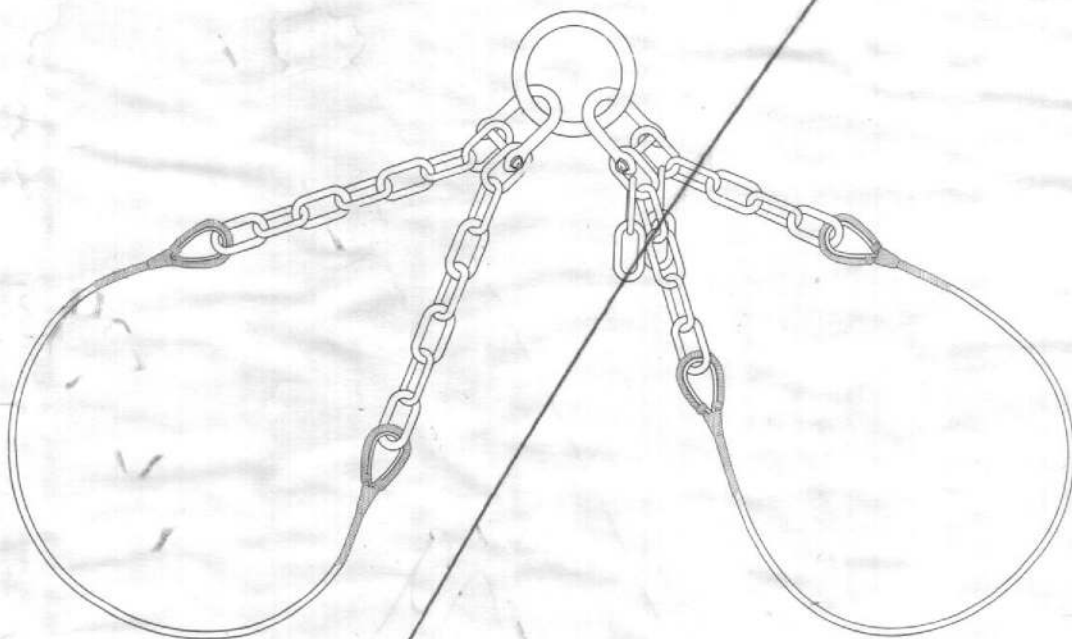
**Weight** (packed) 12 cwt. 2 qr. 14 lb.

**Brief description** This bench is used for the phasing and calibration of fuel injection pumps; it can also be adapted, by the use of certain accessories, for testing fuel feed pumps under working conditions. The bench incorporates a calibration test assembly, which enables the output from the pump elements to be compared, an automatic trip gear to control the start and finish of pump output tests, and a 3 h.p. constant speed, reversible electric motor which drives the pump under test through an infinitely variable gear.

**RESTRICTED**

ITEM 29

## SLING, UNIVERSAL, FOR M.T. ENGINES



**A.P. Reference** 2817A, Vol. 1, and Vol. 6, Part 1, Sect. 11

**Stores Ref.** 16C/5489

**Classification** 2

### Dimensions

Chains:— Length 3 ft. 0 in. Link section dia.  $\frac{1}{4}$  in.  
 Cables:— Length 4 ft. 0 in. Circumference  $\frac{3}{4}$  in. Breaking load 38 cwt.  
 Ring:— Int. dia. 4 in. Section dia. 1 in.

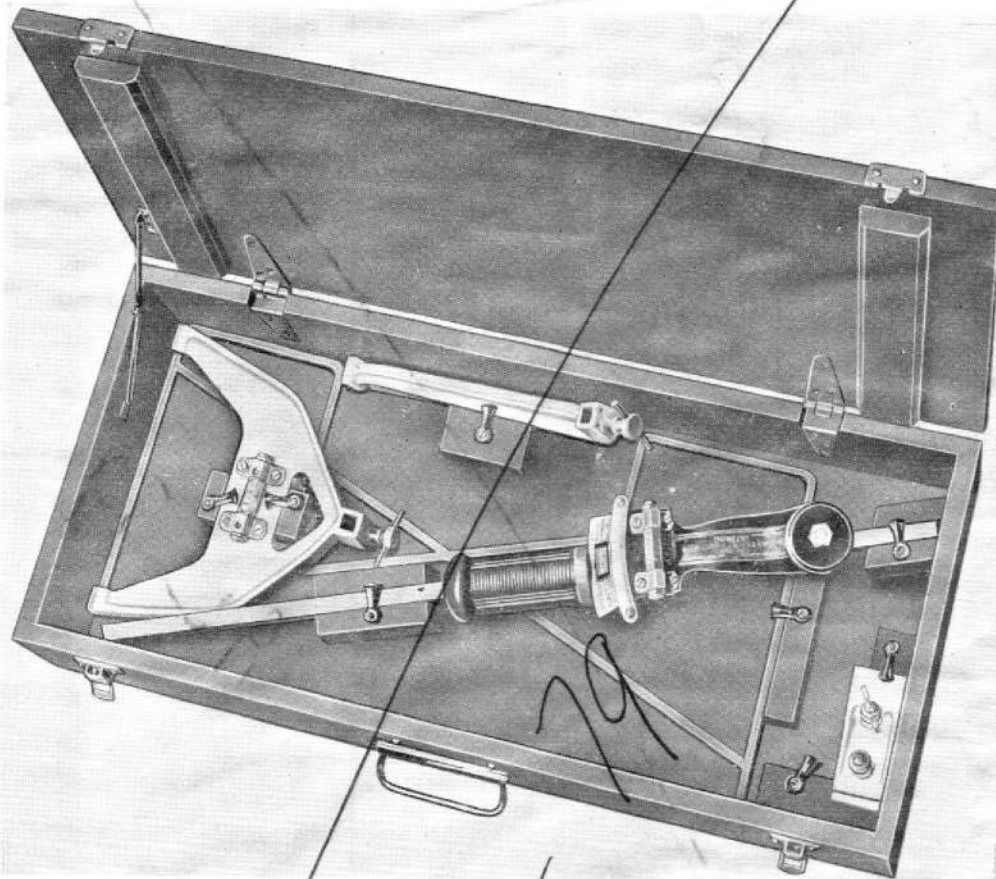
**Weight** 16 lb.

**Brief description** This sling is used for lifting all types of M.T. engines. The sling has two legs each consisting of a steel wire cable spliced at each end to a chain, the chains being connected by two shackles to a main ring. The length of each leg can be adjusted as required by shortening the effective length of the chain and connecting the appropriate links to the shackle. Each cable is fitted with a leather cover for half of its length; the cover is loose to facilitate cable inspection. The maximum safe working load of the sling is 20 cwt. when the legs are at the maximum splay angle of 90 deg.; this is when the cables are 5 ft. apart at the base.

(A.L.27, Mar. 56)

ITEM 30

## GAUGE, CAMBER, CASTOR AND KINGPIN



**A.P. Reference** 1464E, Vol. 1, Part 1, Sect. 5, Chap. 4

**Stores Ref.** 16C/5570

**Classification** 2

**Overall dimensions** (cased)

**Length** 2 ft. 3 in.

**Width** 1 ft. 0 in.

**Height** 5 in.

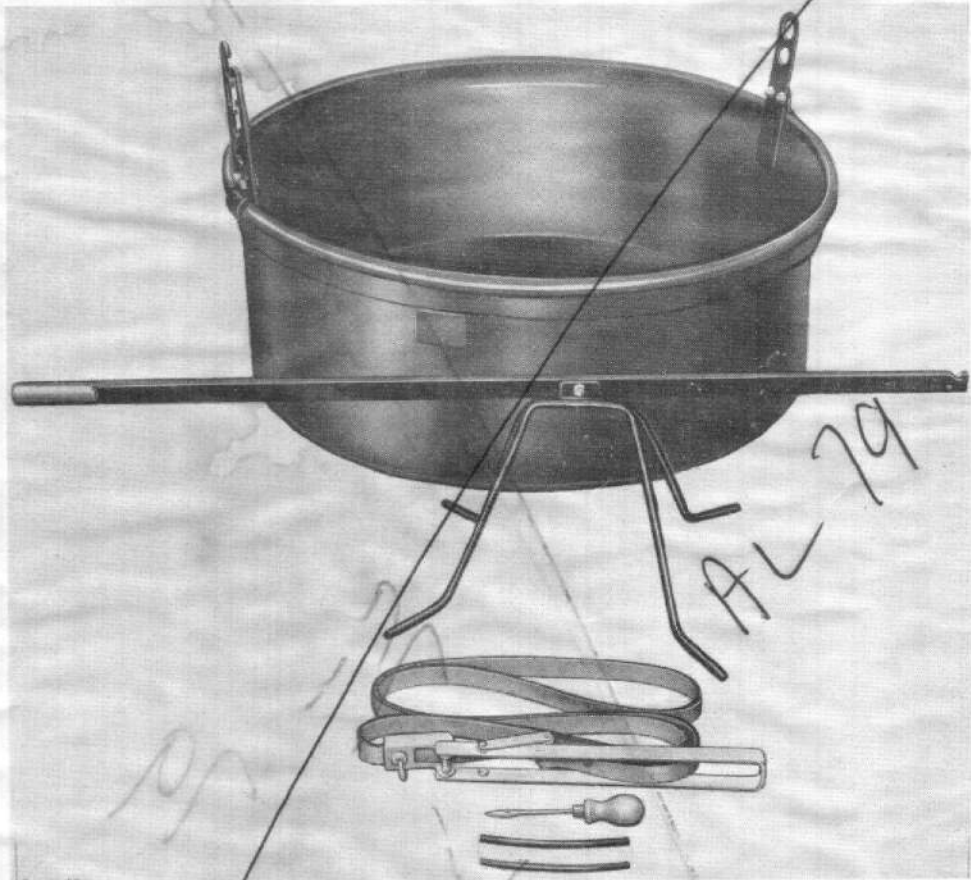
**Weight** 20 $\frac{3}{4}$  lb.

**Brief description** This gauge is used for checking the camber and castor angles and the kingpin inclination of the front wheels of M.T. vehicles. The gauge automatically computes the trigonometrical factors involved in the checks and comprises a graduated quadrant which is mounted on a square bar, together with a double foot and a single foot for positioning the gauge on the wheel rim. A clamp is provided as an alternative mounting for the quadrant when checking the kingpin inclination.

**RESTRICTED**

ITEM 33

## TOOLS, REPAIR, TUBELESS TYRES



A.P. Reference 1464E, Vol. 1, Part 1, Sect. 9, Chap. 2 and 3  
Ref. No. 16C/5882 (tank)  
16C/5883 (submerging lever)

Classification 2

### Overall dimensions

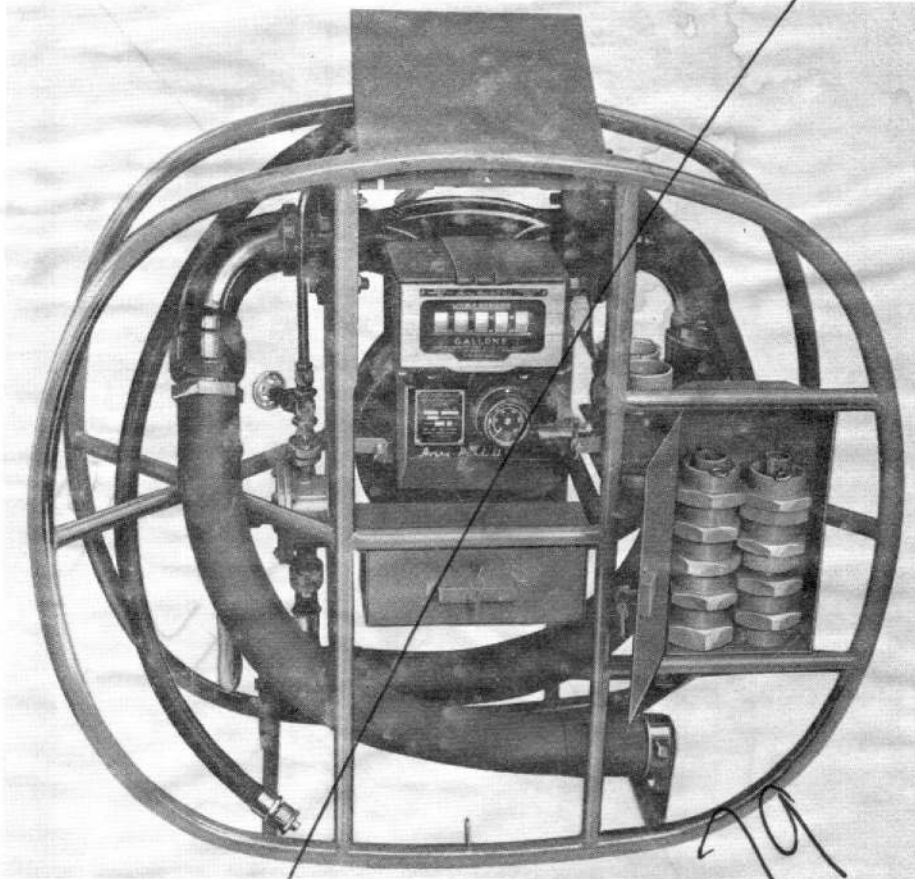
Tank — Diameter 3 ft. 1 in.                      Depth 1 ft. 0 $\frac{3}{4}$  in.  
Lever — Length 3 ft. 9 $\frac{1}{2}$  in.

Weight (tank) 30 lb. (lever) 12 lb.

**Brief description** These repair tools for M.T. tubeless tyres consist of a tank, submerging lever, tourniquet (16C/5884), plugging needle (16C/5885), and rubber plugs (16C/5886-7). The tank will accommodate wheels of rim diameter up to 16 in. and is used for holding water in which the wheel and tyre is immersed for locating leaks or punctures; the lever is used to hold the wheel submerged. The tourniquet, when tightened around the tread of a tyre, expands the tyre walls and presses the beads into the wheel rims to effect sealing during the initial inflation of the tyre. The plugging needle and rubber plugs are used in conjunction with rubber solution for repairing penetration damage to tyres.

ITEM 34

## MASTER METER (REFUELLING VEHICLES)



A.P. Reference 1464E, Vol. 1, Part 2, Sect. 1, Chap. 7

Ref. No. 16C/5982

Classification 2

**Overall dimensions**

Length 3 ft. 8½ in.

Width 1 ft. 4¾ in.

Height 3 ft. 1¾ in.

Weight 2 cwt. 2 qr.

**Brief description** This master meter is used for testing the accuracy of the fuel meters on aircraft refuelling vehicles, and has a maximum rated capacity of 250 g.p.m. and a maximum operating pressure of 150 lb. per sq. in. When making a test, the inlet connection of the master meter is coupled to the end of the refueller delivery hose and its outlet is connected by a length of hose to the refueller carrier tank to form a flow circuit with the refueller pumping system. The meter is mounted in a tubular steel frame for ease of handling and is provided with adapters to suit the various vehicle installations.

**RESTRICTED**

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