



HOME OFFICE

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FIRE SERVICE COLLEGE
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Our reference:

Your reference: FEP 87 59/231/1
FIR 86 610/26/1
FIR 82 610/65/1
FIR 86 26/4/3
FEP 86 30/180/1
FIR 85 620/33/1
FIR 85 82/81/1
FEP 86 17/20/2

- 7 APR 1987
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No 4/87
26 March 1987

To all Chief Officers

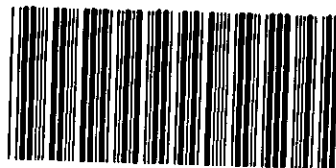
Dear Chief Officer

- A. Letter to all Chief Fire Officers from the Earl of Caithness.
- B. Amendment to DCOL 3/1987 Annex A.
- C. Manual of Firemanship: Slides of illustrations from Book 4.
- D. Training in the use of Boom Ladders fitted to Hydraulic Platforms.
- E. New Home Office booklets 'SMOKE DETECTORS IN THE HOME' and 'HOW TO CHOOSE AND USE FIRE EXTINGUISHERS FOR THE HOME'.
- F. Cliff and similar type rescues.
- G.i. The use of Flowmeters on Fire Service pumps.
ii. An appraisal of Jet/Spray Branches.

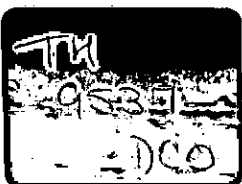
Yours sincerely

R D H DOYLE
Chief Inspector

The Fire Service
College



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HOME OFFICE
QUEEN ANNE'S GATE
LONDON SW1H 9AT

FEP/87 59/231/1

To all Chief Fire Officers

27 February 1987

Dear Chief Officer

It is extremely satisfying to know of the tremendous effort made by the Fire Service during the recent "Siberian Conditions". The determination, ingenuity and skill of the Service in maintaining fire cover and attendances to emergencies during this period has brought much praise. I add my personal thanks and congratulations for a splendid effort.

Yours sincerely

EARL OF CAITHNESS

DCOL [4]/1987

AMENDMENT TO DCOL 3/1987 ANNEX A

The dates given for the Brigade Physical Fitness Education Advisors Course (Phase III) were incorrect.

The dates should read:

4 - 29 January and

8 - 4 March 1988

Please amend your copy of DCOL 3/1987 accordingly.

Fire Reference: FIR/86 610/26/1

Telephone number of contact: 01 213 4150

MANUAL OF FIREMANSHIP: SLIDES OF ILLUSTRATIONS FROM BOOK 4

Fire authorities were informed in Fire Service Circular No 19/1978, and subsequent circulars; of the arrangements which had been made for the production centrally of 35mm colour slides of illustrations which are contained in the Manuals of Firemanship. These slides can be used to illustrate much of the technical information needed by members of brigades and provide a useful general training aid. Slides of the 107 illustrations (but not the photographic plates) in Book 4 (incidents involving aircraft, shipping and railways) are now available and may be ordered from the Home Office Fire Department on the form at Annex. The cost per set of slides is £8.05 + £1. 21 VAT.

File Ref No: FIR/82 610/65/1

Telephone No of contact: 01 213 3136

SLIDES OF ILLUSTRATIONS IN THE MANUAL OF FIREMANSHIP

BRIGADE

Please forward the following sets of slides:-

<u>Book No</u>	<u>Price</u>	<u>Quantity of Sets</u>	
	£	VAT£	
1	1.09	0.16	.....
2	8.38	1.26	.....
3	3.45	0.52	.....
4	8.05	1.21	.....
5	43.16	6.47	.....
6	3.52	0.53	.....
7	3.71	0.55	.....
8	8.00	1.20	.....
9	6.46	0.97	.....
10	4.08	0.61	.....
11	7.26	1.09	.....
12	9.19	1.38	.....
All available slides	106.35	15.95	.....

Signed(CFO/Firemaster)

Name

Date

Please return to: Home Office
Fire Department
Room 941
50 Queen Anne's Gate
London SW1H 9AT

TRAINING IN THE USE OF 'BOOM LADDERS FITTED TO HYDRAULIC PLATFORMS

Following a survey of present brigade practice the Joint Training Committee considered what training in the use of boom ladders fitted to hydraulic platforms should be carried out in brigades.

Where boom ladders are provided they are likely to be used. In these circumstances the employer has a duty imposed by the Health and Safety at Work Act to provide training.

Operational personnel are well versed in the art of ladderwork and there is little value in descending/ascending boom ladders on a fully elevated platform as a matter of routine. However, there are some actions which may be unnerving to the uninitiated and should therefore be practised; these include transferring from the cage or a boom ladder to another boom ladder and traversing a ladder when the boom is horizontal.

In order to reduce the level of risk the following safeguards should be observed:

1. Handgrips should be provided on the booms at strategic positions where it is necessary to transfer from the cage or boom ladder to another boom ladder.
2. After siting the appliance the booms should be positioned to ensure that the points of transfer are as low as possible to achieve the objective of the exercise, eg:
 - a. Transfer from the third boom to the second boom can be achieved with the first boom in the horizontal position (see Figures 1 and 2).
 - b. Traversing a horizontal ladder can be accomplished whilst both the first and second booms are horizontal.
3. Where practicable the point of transfer should be sited over a load bearing flat roof (see Figures 3, 4 and 5). Where there is no such flat roof, the booms should be positioned as in Figure 6.
4. Once the booms have been positioned the power take off should be disengaged, the engine switched off and not restarted whilst anyone is on the ladders or transfer points.

File reference FIR/84 620/13/6

Telephone number of contact: 01-213-3136

TRAINING IN THE USE OF BOOM LADDERS FITTED TO
HYDRAULIC PLATFORMS.

Transfer from cage to second boom not using a flat roof.

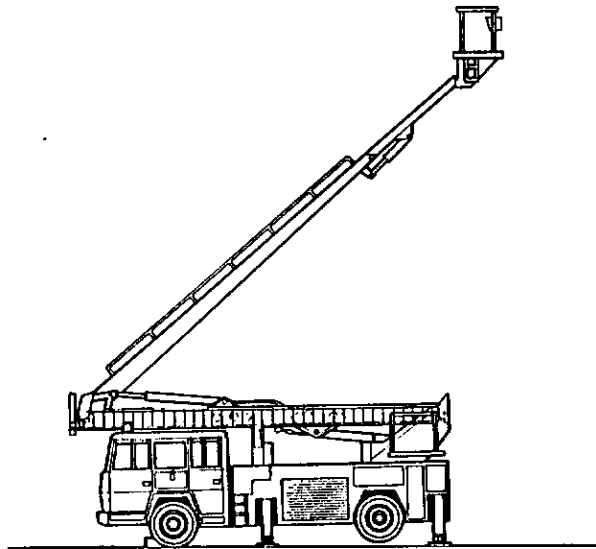


Fig.1. Second and third booms in line.

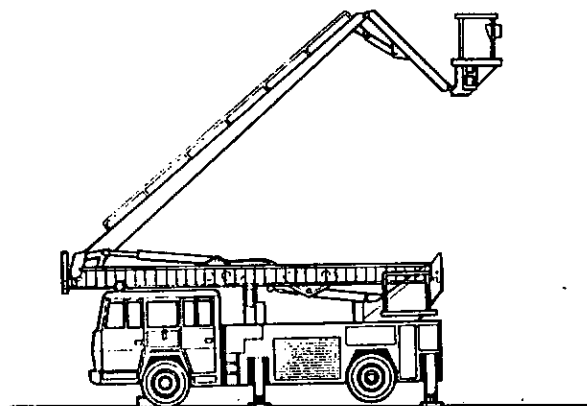


Fig 2. Second and third booms angled.

TRAINING IN THE USE OF BOOM LADDERS FITTED TO HYDRAULIC PLATFORMS

Transfer from cage to second boom, using a flat roof as a safety measure.

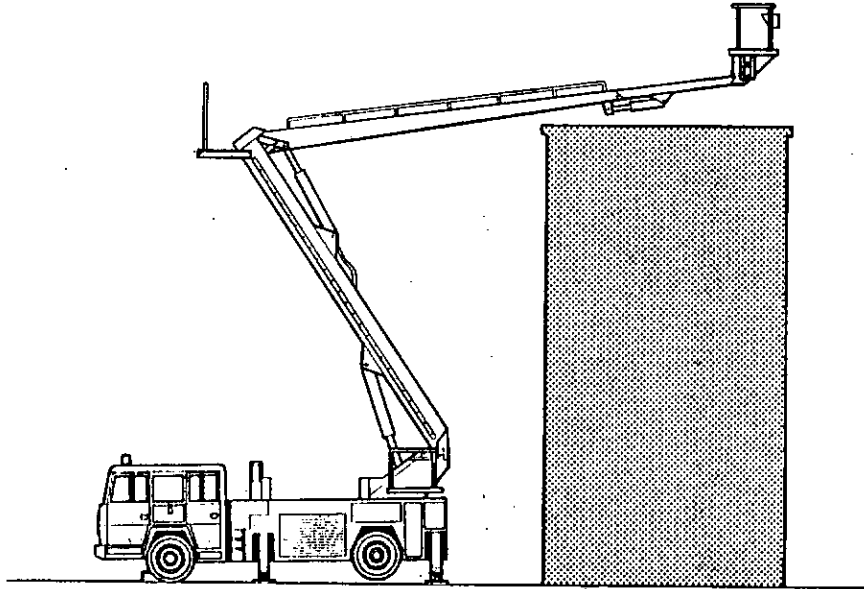


Fig. 3. Second and third booms in line.

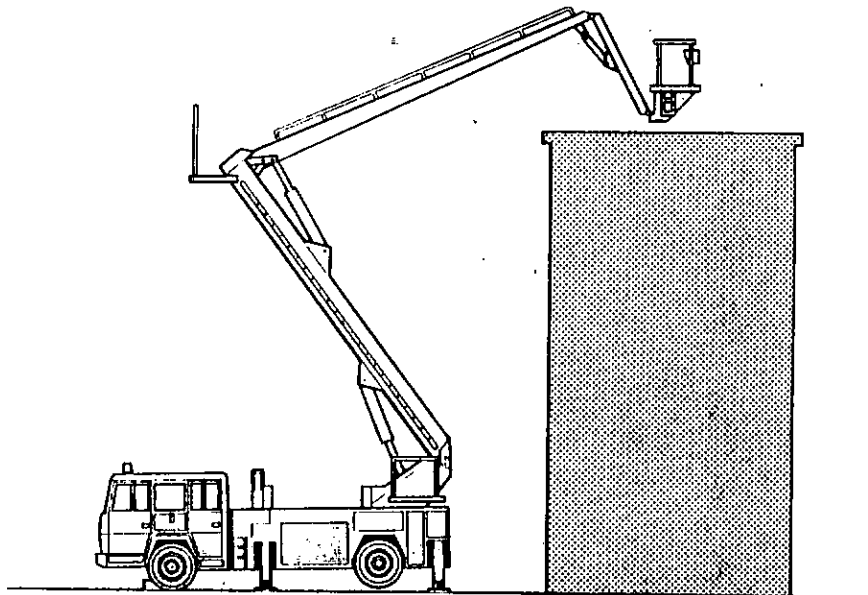


Fig. 4. Second and third booms angled.

TRAINING IN THE USE OF BOOM LADDERS FITTED TO HYDRAULIC PLATFORMS.

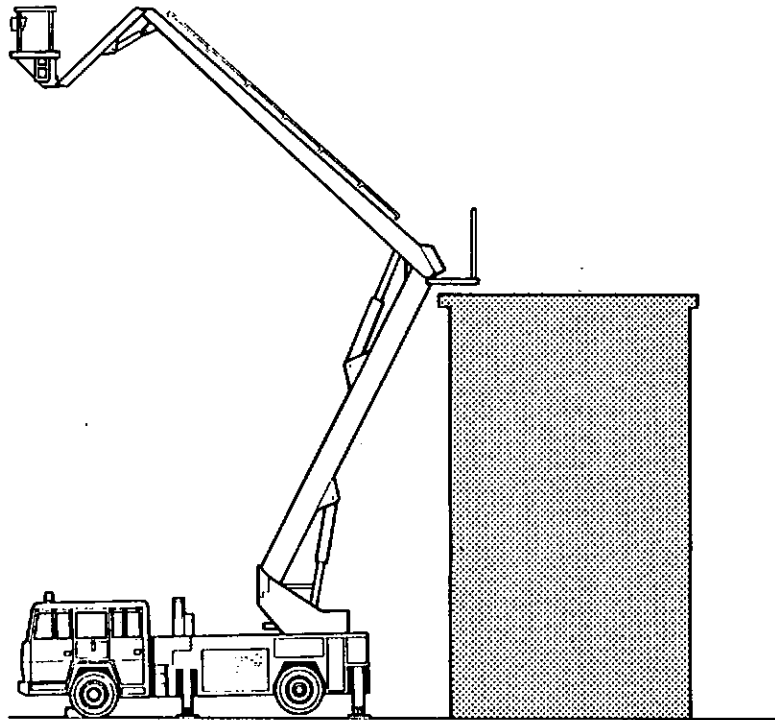


Fig. 5. Transfer from first boom to second boom using a flat roof.

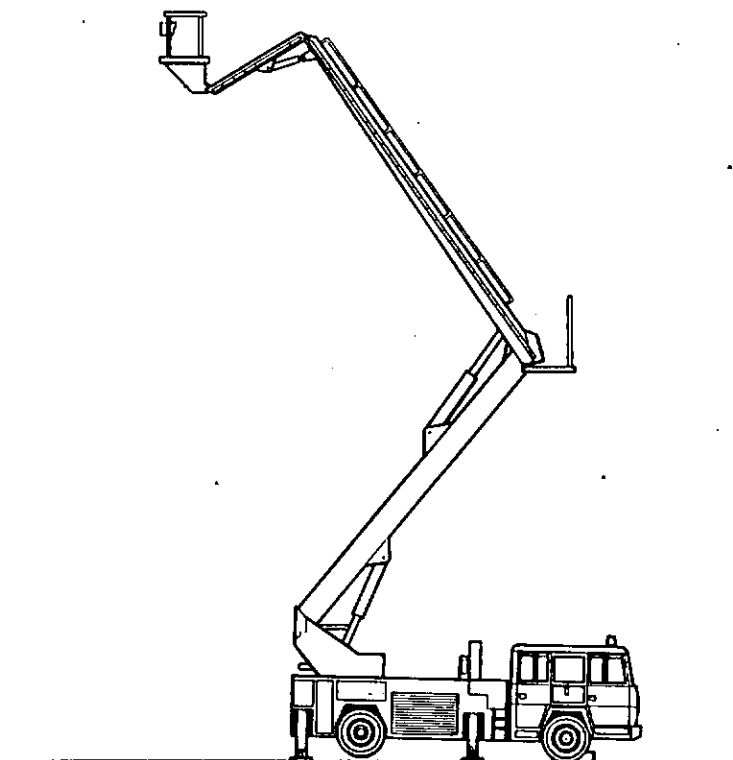


Fig. 6. Transfer from first boom to second boom not using a flat roof.

A. NEW HOME OFFICE BOOKLETS: "SMOKE DETECTORS IN THE HOME" AND "HOW TO CHOOSE AND USE FIRE EXTINGUISHERS FOR THE HOME"

i) "SMOKE DETECTORS IN THE HOME"

A new Home Office booklet "Smoke Detectors in the Home", replacing the now outdated "Fire Detectors in the Home" published in 1984 is soon to be launched accompanied by a special Press Release to mark its publication.

The Home Office has been very much aware of recent public debate and concern on the subject of smoke detectors and the campaigns being conducted by a number of brigades to increase their use. The Department has been studying for some time the likely benefits of the widespread installation of domestic detectors and how far that might help reduce the number of casualties and deaths from domestic fires. In early 1984 fire authorities were issued with advice about the potential benefits of domestic detectors and this was followed up with the issue of a booklet for distribution, through brigades, to the general public.

Although smoke detectors alone are not the answer to domestic fire safety, public interest in this form of protection is increasing and there is no doubt that domestic smoke detectors can make an effective contribution. The subjects of smoke behaviour, fire conditions and detection are particularly complex but Home Office research has shown that if they are properly chosen, correctly positioned and looked after, domestic smoke detectors can give early warning of fire and may increase chances of escape.

The earlier booklet has now been revised and retitled "Smoke Detectors in the Home" and the new edition, significantly, will draw attention to the advisability of having more than one detector. For maximum protection the booklet will advise that smoke detectors should be installed in every room where fire is most likely to start.

Sample copies of the new booklet will shortly be sent under separate cover to Senior Fire Prevention Officers in every brigade in England and Wales. The booklet will be intended primarily for distribution to members of the public who may be interested in purchasing these devices for use in the home. In view of the projected Press Release mentioned earlier, it would be reasonable to expect some immediate public demand for the booklet once launched and although this date has not been finalised, in order to meet this and other anticipated requirements, brigades are invited to order further copies of the booklet (which is free of charge) as soon as possible from:

Publicity Section
Home Office Public Relations Branch
Room 101
50 Queen Anne's Gate
LONDON SW1H 9AT

Tel: 01-213 3034

using the order form that will be enclosed with the samples.

ii) "HOW TO CHOOSE AND USE FIRE EXTINGUISHERS FOR THE HOME"

Although the essence of Home Office fire safety advice to the public is that in general people should not attempt to fight fires in their homes but should escape as quickly as possible and call the fire brigade, there is evidence that a considerable proportion of fires in dwellings are tackled before the brigade arrives. In addition many retail outlets now sell low priced portable fire extinguishers, some of which are not wholly appropriate for use in the home and may be unsuitable for certain types of fire. In such circumstances it has been decided to provide impartial official advice on the choice and use of fire extinguishers in the home.

The Home Office attaches considerable importance to providing the public with sound advice on fire precautions matters and produces a variety of publicity material. Most of this is concerned with general advice on fire precautions in the home rather than with fire protection equipment but the original booklet on smoke detectors was very successful and after consultation with the Joint Fire Prevention Committee it was decided to produce a companion booklet on the subject of fire extinguishers. This is expected to be published at about the same time as the new "Smoke Detectors in the Home" booklet described in Section (i) above.

Rather than advising the public that they need to have a fire extinguisher in their homes, the booklet will be aimed at those who have already decided to buy one and will provide guidance to help people through the very confusing market situation that currently exists. There are many makes and types of fire extinguishers available and none is suitable for every type of fire. The overall message is that although there is no doubt that fire extinguishers in the home can contribute to the protection of property and life if used quickly and correctly, they cannot replace proper fire precautions in the home or "good housekeeping". The booklet will give guidance on the choice and size of suitable equipment and also provide advice on when and how to use it. In particular, emphasis will be given to the importance of buying only equipment which has been manufactured to British Standards or has received BAFE approval.

Sample copies of the extinguisher booklet will be sent under separate cover to Senior Fire Prevention Officers in every brigade in England and Wales shortly. Further copies may be ordered free of charge from Home Office Publicity Section (address above) using the order form that will be enclosed with the samples.

There are no resource implications arising directly from this advice.

File ref FIR/86 26/4/3
FEP/86 30/180/1

Telephone number of contact: 01-213 3501/5040

CLIFF AND SIMILAR TYPE RESCUES

1. Existing guidance on this subject is set out in Fire Services Circular 4/1972, DCOL 14/1983 and in Books 2 and 12 of the Manual of Firemanship. The Joint Committee on Fire Brigade Operations has recently completed a review of this guidance. The purpose was to ascertain whether it required updating to take account of any relevant subsequent developments in rescue techniques and equipment, and the experience of other rescue organisations. The review involved extensive research into the structure and work of Her Majesty's Coastguard Service, and the inland Mountain Rescue Organisation, who have a wealth of experience in coastal and mountainous areas. It also examined and took into account experiences and practices of several fire brigades in areas where there is most call for cliff and similar type rescues.
2. After detailed consideration, the Committee concluded that central guidance should remain in broad terms. Local conditions and arrangements vary widely, so precise procedures and liaison with other services need to be determined locally. The Committee noted that there had been widespread increase in the use of radio communications since the 1972 guidance was issued. Otherwise, no new broad principles had been established in this period.
3. The review concluded that both HMCG and the Mountain Rescue Organisation possessed fully adequate expertise, experience and equipment, and normally expected to carry out cliff type rescues, and that the fire service role is, in most areas, generally supportive eg the supply of pumping equipment. On the other hand, there were types of rescues and particular areas of the country where the fire brigade is called upon to take the lead. It also has to be borne in mind that cliff and similar rescues comprise only a small proportion of total fire brigade activity.
4. Where a brigade has or is likely to have a lead role, key requirements are pre-planning and where feasible local liaison with the other rescue and emergency services. In such circumstances, Chief Fire Officers should ensure that firefighters are adequately trained to undertake their tasks effectively and safely, and that their equipment is suitable for the purpose. The Committee felt that the required degree of expertise could best be obtained by co-operation, and initiatives involving the other rescue services. The benefits

for both brigades and other rescue services in Chief Fire Officers being actively involved in Regional Mountain Rescue and Search and Rescue Committees wherever possible was recognised.

5. To help ensure that fire service interests and views are covered at national level, it has been agreed that the Fire Service Inspectorate should attend meetings of the United Kingdom Safety and Rescue Committee and the National Mountain Rescue Committees. These organisations exchange views and experiences, and may recommend techniques. This arrangement will provide an important source of information for the Joint Committee and, where necessary, fire brigades.
6. Details of sources of information from which Chief Fire Officers may seek further detailed advice are annexed to this letter.
7. There could be cost implications for some brigades arising from this guidance; the extent of which being largely dependent upon the outcome of the brigade's appraisal of their existing operational and training arrangements.

FIR/85 620/33/1

Telephone number of contact: 01 213 5307

The following sources of information may assist Chief Fire Officers in their preparations for involvement in cliff and similar type rescue operations

HM COASTGUARD REGIONAL CONTROLLERS

Regional Controller Aberdeen SRR
Cdr D T Ancona RN Rtd
HM Coastguard
Blakies Quay
Aberdeen AB1 2PB

Tel: Aberdeen (0224) 580999

Regional Controller Yarmouth SRR
Mr W E Barnes
HM Coastguard
4th Floor
Havenbridge House
Gt Yarmouth NR30 1HZ

Tel: Gr Yarmouth (0493) 851411

Regional Controller Dover SRR
Lt Cdr P S Warrington RN Rtd
HM Coastguard
Langdon Battery
Swingate
Dover CG15 5NA

Tel: Dover (0304) 852515

Regional Controller Falmouth SSR
Cdr DG Elliot RN Rtd
HM Coastguard
Imperial Building
Bar Road
Falmouth TR11 4NW

Tel: Falmouth (0236) 318015

Regional Controller Swansea SRR
Mr S E Richards
HM Coastguard
164-166 Overland Road
Humbles
Swansea SA3 4EX

Tel: Swansea (0792) 68472

Regional Controller Clyde SRR
Mr I Huntington
HM Coastguard
Navy Buildings
Eldon Street
Greenock PA16 7QY

Tel: Greenock (0475) 84621

RAF MOUNTAIN RESCUE ORGANISATION

SQ Leader R Foster
Inspector of Land Rescue
HQ Strike Command
RAF High Wycombe
Buckinghamshire
HP14 4UG

Tel: High Wycombe (0494) 26200 ext 683

MOUNTAIN CAVE RESCUE ORGANISATION

Official Mountain and Cave Rescue Handbook

Mountain Rescue Committee
Hon Sec Mr R J Davies
18 Tarnside Fold
Simmondley
Glossop
Derbyshire SK13 GND

Tel: Glasgow (04574) 3095

KENT FIRE BRIGADE

County Fire officer
Fire Department
Tovil
Maidstone
Kent ME15 6XB

Tel: Maidstone (0622) 54311

SOMERSET FIRE BRIGADE

Chief Fire Officer
Fire Brigade Headquarters
Hestercombe House
Cheddon Fitzpaine
Taunton
Somerset TA2 8LQ

Tel: Taunton (0823) 87222

CORNWALL FIRE BRIGADE

Chief Fire Officer
Fire Brigade Headquarters
County Hall
Station Road
Truro
Cornwall TR1 3HA

Tel: Truro (0872) 73117

A. THE USE OF FLOWMETERS ON FIRE SERVICE PUMPS

1. The attached Research Report 27 describes a series of tests, undertaken within the Home Office fire research programme, to evaluate the use of flowmeters on fire service pumps. The research was carried out by the Fire Experimental Unit of the Home Office Scientific Research and Development Branch. Although brigades in the United Kingdom have traditionally relied on the experience and skills of pump operators using only conventional pressure gauges to estimate flow rate, the tests were designed to assess whether flowmeters could enable pump operators to achieve greater accuracy in calculation and control of flow rate, in the interest of both safety and efficiency. The accuracy of flowmeters and their applicability to fire service requirements were therefore assessed by means of a series of tests under different conditions including simulated operational conditions.

2. For the purposes of the tests five flowmeters, one functioning on the pitot principle, the others on the paddlewheel principle, were used. Only one had been specifically designed for fire service use. All the flowmeters featured in the research were found to give accurate results in test conditions, although the flowmeter operating on the pitot system was deemed unsuitable for fire service use because of the manufacturer's recommendations to bleed the system before use. Further tests were carried out on a typical paddlewheel flowmeter to assess its accuracy when mounted in the turbulent area near the valves of a fire service pump. The performance of flowmeters when used with hand-controlled jet/spray and foam branches was also assessed by an experienced fire officer. However, neither long-term reliability nor performance with contaminated or gritty water were evaluated.

3. The conclusion of the researchers is that paddlewheel flowmeters could assist pump operators to operate more effectively on the fire ground but that some retraining would be necessary. They also suggest that apart from simplifying the operator's task in supplying water in correct quantities for the efficient and safe use of branches, the fitting of flowmeters to pumps could facilitate calculations of pumping time available from limited water sources, the flow of water into a building or ship, or the provision of optimum supply to a foam generator, etc. Greater accuracy is obtained if the flowmeter is mounted in a straight pipe well away from the pump turbulence, but the performance is not seriously degraded when fitted close to the delivery valve of the pump as might be necessary where the pump is rear mounted with rear access.

4. At its meeting on 14 May 1986 the Joint Committee on Fire Research agreed that the report should be issued to brigades for information. The Committee also agreed that a series of brigade trials should be arranged and monitored by the FEU to assess the value of flowmeters in operational conditions. It is proposed therefore to undertake trials in 3 brigades over a period of one year beginning in Autumn 1986. The results of these trials will be considered by the Joint Committee on Fire Research in the Summer of 1988 and subsequently reported to Chief Officers in a further letter.

5. There are no cost or manpower implications arising from this part of the letter.

File reference: FIR/85 82/81/1

Telephone number of contact: 01 213 3161

B. AN APPRAISAL OF JET/SPRAY BRANCHES

1. In DCO letter 6/1984 Chief Officers were advised of a research project undertaken by the Fire Experimental Unit of the Home Office Scientific Research and Development Branch to evaluate, by means of a series of tests, 31 jet/spray branches. The report of this work was issued in three parts as CFBAC research Report 22, "An Appraisal of Jet/Spray Branches". Subsequent to this project an additional piece of work has been carried out, also by the Fire Experimental Unit, to examine a further 6 jet/spray branches which had not previously been assessed, and an addendum report has been produced. At its meeting in May 1986 the Joint Committee on Fire Research agreed that this should be issued to fire service to supplement Report No 22, and a copy is accordingly attached to this letter as Research Report 28 in the CFBAC series.
2. It is anticipated that Chief Officers will wish to use this addendum report in conjunction with Report No 22 to provide a more exhaustive appraisal of those branches currently available to brigades. In order that accurate comparisons can be made between the branches assessed in either report, the 6 branches involved in this later work have been categorised accordingly to the same criteria adopted before and, as far as possible, the trials have been conducted in an identical manner to those carried out for the original appraisal. Brigades are asked to refer to Report No 22 for detailed description of these trials, which included hydraulic performance tests, handling tests and an assessment of maintenance and repair aspects. It should be noted, however, that these did not include 35° elevation trials or robustness trials, and since it was necessary to employ a different branchman in the practical handling tests comments on this aspect of the evaluation may not correlate accurately with those in Report No 22.
3. Although it is thought that brigades will wish to use this addendum report to supplement earlier research, they should bear in mind that over 2 years have elapsed between the ordering of branches assessed under each project. Modifications altering a branch's specifications and performance may have been introduced by manufacturers during this interval with the effect that any such variations could result in changes of performance. It is therefore not possible to make direct comparisons with the equipment tested in the first study and the report should consequently be viewed as an approximate guide to the branches now available. It must be stressed that brigades contemplating the purchase of any branches should first consult the manufacturer or supplier in all cases for information regarding current specifications, prices and availability.
4. No additional cost or manpower implications arise from this part of the letter.

File reference: FEP/86 17/20/2

Telephone number of contact: 01 213 3161