



ProGuide Series
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PAGES**

USAR OPERATIONS

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URBAN SEARCH AND RESCUE OPERATIONS

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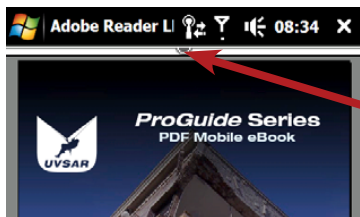
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BOOKMARKS AND NAVIGATION

To find your way around this eBook, use the Bookmarks panel. On a PC this is to the left of your screen. On a PDA running Adobe Reader LE 2.5, it's a pull-down curtain at the top of the screen – click the hotspot as shown below.



Bookmarks hotspot

The text is searchable and you can zoom in and out as required. Because the page layout is important to the content, we advise against using automatic text reflow.

CHANGES FROM PAPER EDITION

- Table of contents replaced by bookmarks panel.
- Graphics optimised for 150dpi displays and lower.
- Casualty forms omitted; replaced with reference tables.
- Blank notepaper sheets and rear cover omitted.

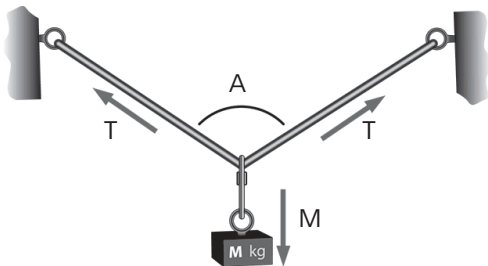
SCENE SAFETY CONSIDERATIONS

- ✓ Establish overall cordon
- ✓ Check area with CBRN detection, identification and monitoring equipment
- ✓ Assess for risks of fire, flooding, secondary collapses, presence of voids and sewers, etc.
- ✓ Assess for secondary devices & personal security threats
- ✓ Assess need for work at height / confined space access
- ✓ Appoint Safety/Sector/Specialist Officers as required
- ✓ Ensure any discovered hazards are clearly identified
- ✓ Eliminate risks from utilities and building services
- ✓ Consider wind direction (gas/dust/smoke plumes etc.)
- ✓ Establish PPE requirements and arrange provision
- ✓ Ensure safe systems of work are in place
- ✓ Ensure rescue/evacuation/medical support is available if necessary (e.g. for confined space, hazmat, work at height)
- ✓ Confirm evacuation signal & roll call area to all personnel
- ✓ Ensure safety plans for/of other agencies are compatible

**LARGER INCIDENTS = MORE CONFUSION
BETTER MANAGEMENT SAVES LIVES**

BRIDLE LOAD VS. ANGLE OF SPAN

For a load M and an equal bridle angle A , the line tension T equals M multiplied by the bridle factor B :-



$$T = M \times B$$

Angle A	0°	60°	90°	120°	150°
Bridle factor B	0.5	0.58	0.7	1	2

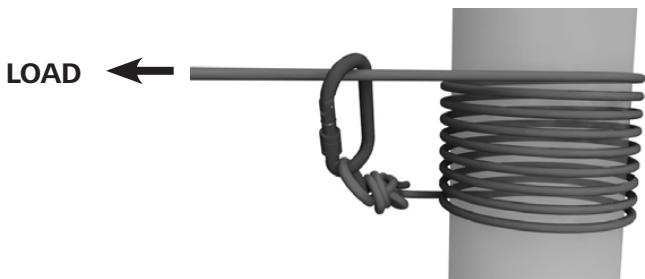
e.g. if $A=90^\circ$ and $M=100\text{kg}$, the rope tension $T = 70\text{kg}$



For lifting and moving always keep the bridle angle A below 120°

If the bridle legs are not at equal angles, use the force triangle method from page 22.

TENSIONLESS (POST) HITCH



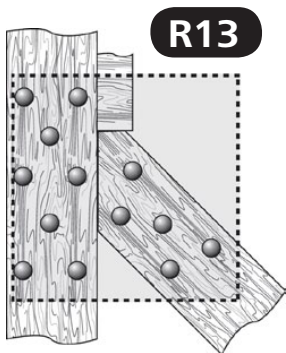
Strength up to 100% of rope. Use at least 8 turns and make sure the anchor object is strong enough and cannot rotate. Insert padding if the object has sharp edges. Can be formed in wire rope provided object is large and round, e.g. a tree.

Any method can secure the loose end - it can be tied back to the main line as shown or to a second anchor, but should not be used to carry a load (in case the hitch needs to be released).



Connect the loose end to a second anchor point if the direction of the main line tension is planned to change

Raker shore gussets

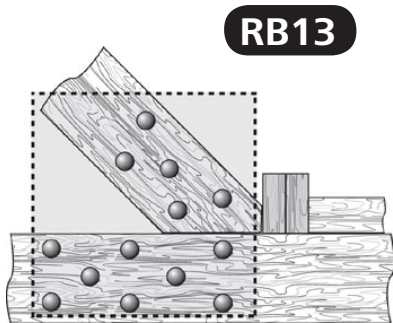
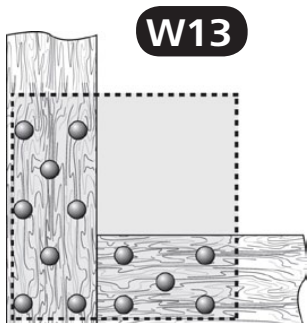


R13 = top of raker post
 W13 = wall/sole plate junction
 RB13 = bottom of raker post

Always applied both sides.

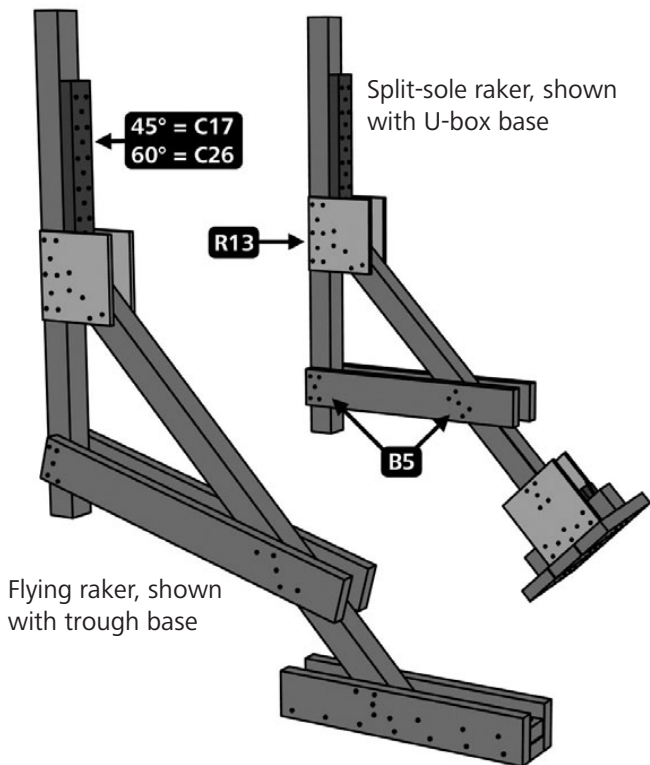
Note that in pattern RB13 the gusset plate is shifted, compared to R13, to allow clearance for the wedge blocks.

Gussets should be inset by approx $\frac{1}{2}$ " [10mm] from wall and floor to avoid taking any direct side load.



SPLIT-SOLE (FLYING) RAKER SHORE

At least two rakers per shore. Insert mid-point brace if required by raker post's L/D. Choose base type to suit ground conditions.



CTD NEXT PAGE

PRIMARY SURVEY**SA-cspine-BCDE**

Scene assessment and safety (don your gloves)

Airway patency, with **c-spine** control

Breathing

Circulation

Disability (4-way level of response, pupil reactions)

Exposure (visual exam for trauma, body temp, medic-alerts)

PHYSICAL EXAMINATION**DCAP BTLS**

Deformities

Contusions

Abrasions

Punctures

Burns

Tenderness

Lacerations

Swelling

4-WAY LEVEL OF RESPONSE**AVPU**

Alert (conscious and reacting normally)

Responds to **V**oice (moves or replies on command)

Responds to **P**ain (moves or replies when pain is applied)

Unresponsive (no response, completely unconscious)

PUPILS**PERRLA**

Equal, **R**ound, **R**eactive to **L**ight (irises contract) and

Accommodation (eyes 'cross' to focus on a close-by object)

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