TACKLE BLOCKS AND SNATCH BLOCKS

	cc	ONTENTS	PAGE		contact with only the grooved surface of the es and that it does not ride on any of the
1.	GENERAL			fixed	parts.
2. 9	SAFETY PRECAUTION	ons	1	2.04	A hook which has begun to straighten shall immediately be removed from use and
3. 1	BLOCK TERMS .		1	discar	
4.	TACKLE BLOCKS		2	2.05	Do not use blocks with sheave holes too small to give sufficient clearance between
5.	SNATCH BLOCKS		3	the s	heaves and the sides and top.
6. I	REEVING BLOCKS		3	2.06	The safety precautions set forth in Sections 081-510-101 and 081-511-101 shall be adhered
7.	RIGGING	200 B 100	5	to.	
8. (USE OF BLOCKS	2001	6	3. B	LOCK TERMS
	SELECTING SIZE WORK TO BE PER	OF BLOCKS FOR FORMED	THE 7		
10. 1	NSPECTION OF B	LOCKS	8	3.01	The terms used in this section pertaining to blocks are as follows:
11.	MAINTAINING BLO	OCKS IN THE FIELD	8		The parts of a block are the shell, sheave, hook, becket, becket bolt, bushing, sheave
1. G	ENERAL	- 200 (W) 10 1 1 1 1			, cotter pin, center strap, outside strap, and er bushing (Fig. 1).
1.01		escribes the use, standard blocks.			Tackle: An assemblage of rope and blocks. The rope is commonly called the fall.
.02	load limits of m	issued to revise the nanila rope when is natch blocks. Th	used with	(c)	Running Block: Block attached to object to be moved.
includ Plasti	es the maximum	load limits applic ed in place of ma	able to B	(d)	Standing Block: Block attached to the fixed support.
2. S	AFETY PRECAUTIO	ons ^{eq}		(e)	Overhaul Blocks: To separate or spread blocks in a tackle.
2.01	Do not use blo	ocks if the sheave	es do not	(f)	"un-in Blocks: To bring blocks close: together.
2.02	Do not oil roller	r bushed sheaves.		(g)	Chock-a-Block: Blocks of a tackle in contact.
2.03 these	sheaves. Insp	s with sharp edges ect sheaves frequ hould be taken that	ently for	(h)	Standing End: End of rope fixed to the block.

**Reprinted to comply with modified final judgment.

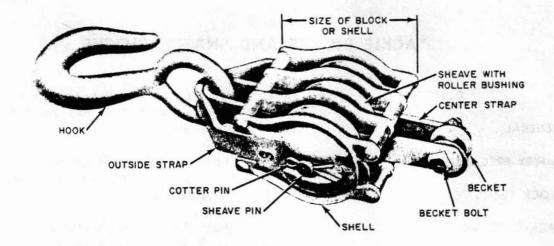


Fig. 1—Three Sheave Tackle Block

- (i) Luffing a Block: Taking a purchase on the fall line of a set of blocks with another set of blocks.
- (j) Running End or Fall End: Free end of rope in the tackle.
- (k) Return: Rope between the two blocks.

 Reeving Blocks: To pass rope through the aperture of the blocks and over the sheaves so as to obtain mechanical advantage.

4. TACKLE BLOCKS

4.01 Tackle Blocks are sized by shell length and number of sheaves. Equipped with an open-type hook unless ordered with a shackle, blocks are furnished in the sizes given in Table

TABLE A

вьоск	NO. OF SHEAVES	MAXIMUM LOAD LIMIT (LBS)		ROPE SIZE	SUGGESTED	NO. OF MEN NEEDED WITHOUT AND WITH	
SIZE (INCHES)		MANILA ROPE	B PLASTIC ROPE	(INCHES)	ROPE LENGTH (FEET)	LUFFING '	WITH
3	1	400	900	3/8	50	2	
3	2	800	1200	3/8	75	2	
3	3	1200	1800	3/8	100	2	
4	3	2500	3000	1/2	150	3 01	. 1
6	3	4500	5000	3/4	200	word ad	1
8	3	7500	7600	1	275	of the may be	2

^{*} Assuming Max. pull per man of 130 pounds and 3-inch 3-sheave luffing blocks (See 8.01)

4.02 Always load the hook at the bottom of the opening, never on the point

5. SNATCH BLOCKS

- 5.01 ♦Snatch Blocks shall be used only with manila or B Plastic Rope. Wire Rope Snatch Blocks are covered in Section 081-520-150.◆
- 5.02 ♦Snatch Blocks are usually used to change the direction of rope pull. ♦
- 5.03 ♦Fig. 2 illustrates the parts that comprise the Snatch Block.
- 5.04 Snatch Blocks are furnished in the sizes given in Table B with the corresponding

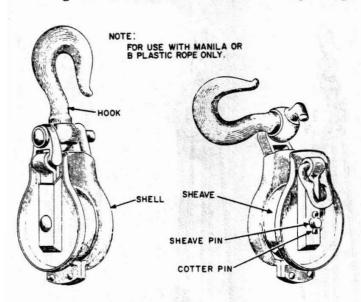


Fig. 2—Snatch Block

TABLE B

SI		PE REQUI	IZES, LOAD REMENTS	S,
BLOCK	NO. OF	MAXIMI	ROPE	
(INCHES)	SHEAVES	MANILA ROPE	B PLASTIC ROPE	(INCHES)
6	1	750	2200	3/4
8	1	1250	3700	1

Note: When snatch blocks are used as tackle blocks, the maximum load limits are double the value shown above.

maximum load limits for both manila and B Plastic Rope.

6. REEVING BLOCKS

- 6.01 It is important that blocks be reeved properly in order to have them operate to the best advantage and to avoid jamming of the tackle while under strain with the resultant loss of time and possibility of accident.
- 6.02 Before using new rope to reeve blocks, place the rope under slight tension. This will facilitate handling of the rope.

6.03 Fig. 3 shows preferred methods for reeving a pair of tackle blocks. The numbers are

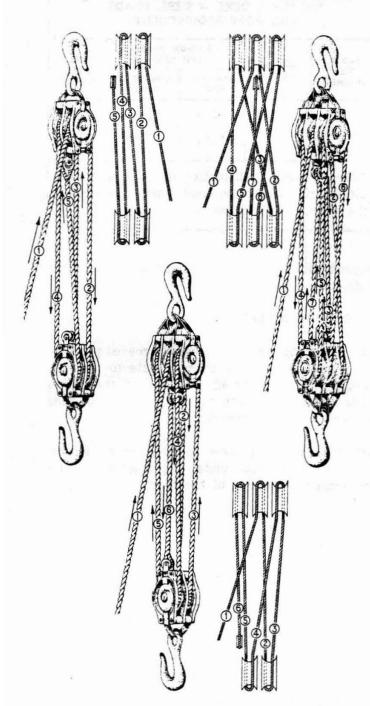


Fig. 3—Reeving Blocks (Preferred Methods)

shown to facilitate following the reeving illustrated. When the block has three sheaves, the fall line should lead from the center sheave of the upper blocks as shown. When so reeved, the hoisting strain comes on the center of the blocks and they are prevented from turning with consequent injury to the rope by cutting across the edges of the block shell. In order to reeve by this method, the two blocks should be placed so the sheaves in the upper block are at right angles to those in the lower one.

6.04 Where there is a likelihood of the rope being tangled when following the reeving suggested in 6.03 the blocks may be reeved left over right as shown in Fig. 4.

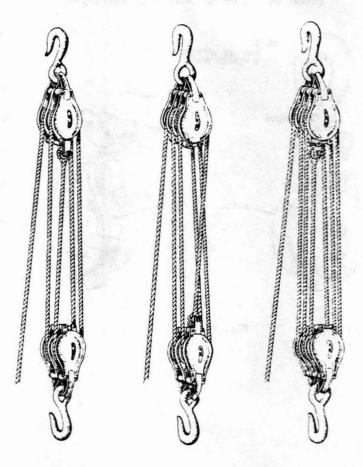


Fig. 4—Reeving Blocks (Alternative Methods)

7. RIGGING

7.01 The first important part in rigging is to know the approximate weight of the load to be hauled, lifted, or held. This will determine the rigging to be used. (See Part 8 and 9.) Select a system of rigging to perform the work adequately, efficiently, and safely.

7.02 Fig. 5 and 6 show two methods of arranging blocks, one lifting and the other hauling a load.

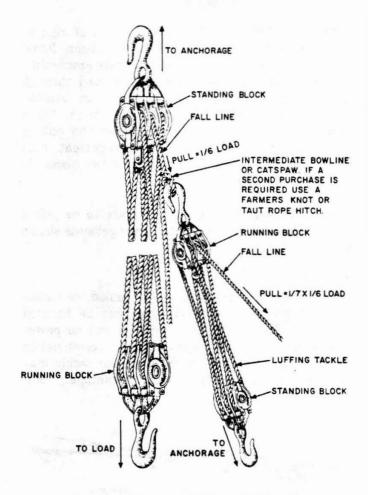


Fig. 5—Lifting Load Using Luffing Tackle

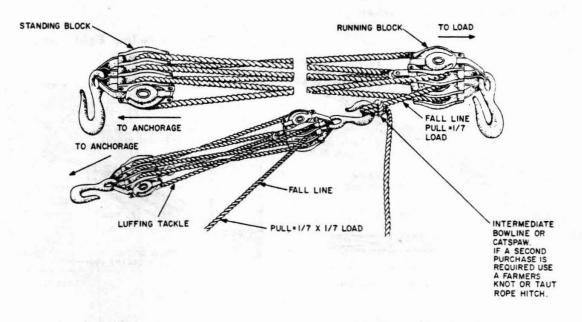


Fig. 6—Hauling Load Using Luffing Tackle

7.03 Fig. 7 through 11 show systems of rigging or strain equalizing that have been found satisfactory for pulling open wire. Where practicable, use rope that has had the twist removed through usage. In general, twist in new rope can be removed by placing a strain on the rope. If a tendency for twisting occurs between the pulling up blocks and strain equalizing arrangement, hold the blocks in position by means of a bar placed in the hook of the block.

7.04 Where more than 10 wires are to be pulled use a combination of the arrangements shown in Fig. 7 through 11.

8. USE OF BLOCKS

8.01 When the load to be held, hauled, or raised is greater than that which can be handled safely and directly by the workmen and no power equipment to do the work is available, a combination of block and ropes known as block and tackle may be used to gain a mechanical advantage. For

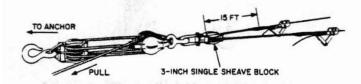


Fig. 7-Pulling Two Open Wires

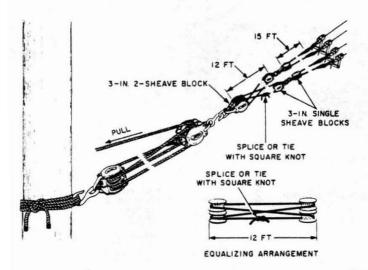


Fig. 8-Pulling Four Open Wires

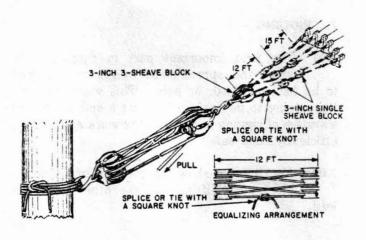


Fig. 9—Pulling Six Open Wires

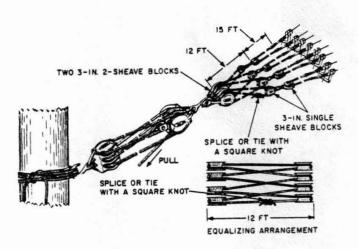


Fig. 10-Pulling Eight Open Wires

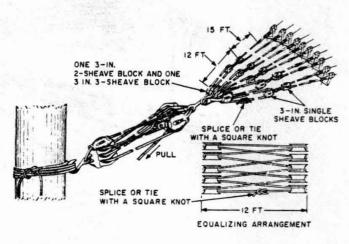


Fig. 11—Pulling Ten Open Wires

practical purposes the weight capable of being lifted is equal to the applied force multiplied by the number of ropes supporting the lower or running block. For example, if a man can exert a pull of 130 pounds on the fall line of a pair of three sheave blocks, he will be capable of lifting approximately 6 by 130 or 780 pounds with three sheave blocks and tackle. This assumes that the fall line leaves the standing block. If the fall line leaves the running block as in the case of hauling a load (Fig. 6), a man can exert a pull of 780 pounds plus 130 pounds or 910 pounds which is seven times the applied force.

9. SELECTING SIZE OF BLOCKS FOR THE WORK TO BE PERFORMED

9.01 To select the proper blocks for the work to be performed, it is necessary to know the BLOCKS

3-Inch, 1-Sheave: Intended for use in connection with strain equalizing blocks, raising cables in place in cable vaults, and with block and house cable work.

3-Inch, 2-Sheave: Intended for use in connection with strain equalizing blocks, cutting in or out transpositions, dead ends and pulling up 1 or 2 pairs of open wires.

3-Inch, 3-Sheave: Intended for use of block and house cable crews in connection with pulling up 2200 pound strand and in making up strain equalizing blocks (Part 7).

4-Inch, 3-Sheave: *Intended for use in connection with pulling up unloaded 6M suspension strand, and guys where suspension strand has not been placed. Also for pulling 10 wires with equalizing blocks (Part 7). Raising loading coil cases. Pulling slack in strand and general rigging.

approximate weight of the load to be hauled, lifted, or held.

9.02 Knowing the weight of the load, consult Table A and select a system of rigging which has a maximum load limit equal to or exceeding the load to be handled. This table also indicates the number of men necessary to handle the load, considering 3 men as the maximum number which can be used efficiently on a fall line.

9.03 Should Table A indicate that luffing tackle is required, select a system of rigging as shown in Fig. 5 and 6.

9.04 In connection with telephone work the following sizes of blocks have been found satisfactory for the uses specified and are the sizes in general being used by the construction forces for this type of work.

6-Inch, 3-Sheave:	*Intended for use in connec- tion with raising riser
	cable, 35 ft. or smaller poles, pulling loaded 6M and 10M suspension strand and guys and unloaded 16M suspension strand and guys, and for general rigging.

8-Inch, 3-Sheave: *Intended for use in connection with unloading poles, raising poles over 35 ft. in length, pulling loaded 16M suspension strand, unloaded 25M suspension strand and guys, pulling slack in strand and general rigging.

6-Inch Snatch Block

BLOCKS

Intended for use in changing the direction of a 3/4or 1-inch pulling line.

8-Inch Snatch Block Intended for use in connection with raising poles, pulling cable and similar work.

* Block and tackle shall be used for pulling suspension strand, erecting poles, placing riser cable, etc, only where there is no power equipment available to do the work.

10. INSPECTION OF BLOCKS

- 10.01 Blocks should be examined to determine their conditions. The important conditions to look for are:
 - (a) Bent, cracked, or broken shell
 - (b) Cracked or broken sheave
 - (c) Cracked or broken straps
 - (d) Bent hook
 - (e) Cotter pin missing
 - (f) Roller bushing not functioning
 - (g) Cracked or broken becket.

10.02 If the condition of the block is such that there is any doubt as to its safety, it should be exchanged at once for one in good condition in accordance with the locally established routine.

11. MAINTAINING BLOCKS IN THE FIELD

11.01 Keep blocks clean of oil and dirt. The sheaves of the standard blocks are roller bushed and operate better without oil which tends to collect dirt thus causing the rollers to bind. Never oil the sheaves of the standard block; if they do not function properly remove the sheaves and jar the dirt from the rollers by lightly tapping the sides of the sheave.