

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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POWER WINCHES

SINGLE-DRUM

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1. GENERAL

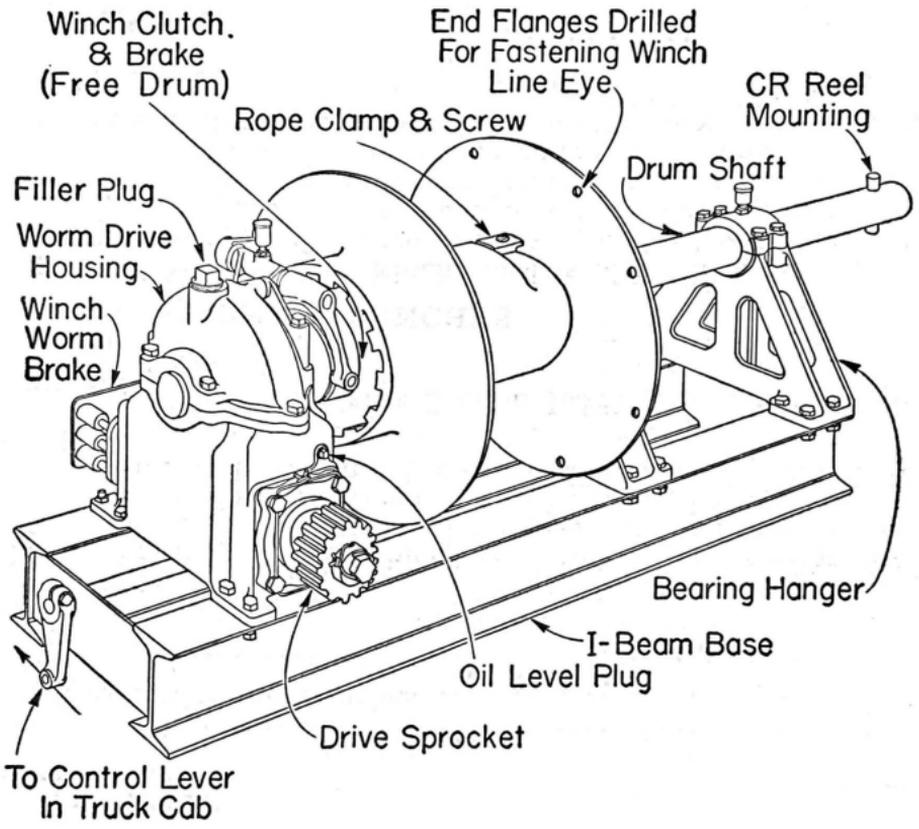
1.01 The single-drum winches covered in this section are the L12, the L18, the D Single-Drum, the UG Single-Drum and the FM-L12 winches. The L12 and the L18 are old type winches and have not been available since the first half of 1947.

1.02 This section replaces Section J6.752, Power Winches—Single-Drum.

2. DESCRIPTION OF WINCHES

2.01 L12 Winch: This winch consists of a winch shaft supported by a winch worm housing and a bearing hanger mounted on two I-beams fastened to winch mounting brackets which are attached to the truck frame. The winch is usually equipped with a combination winch clutch and brake, but some of the older L12 winches in the field may not have this feature.

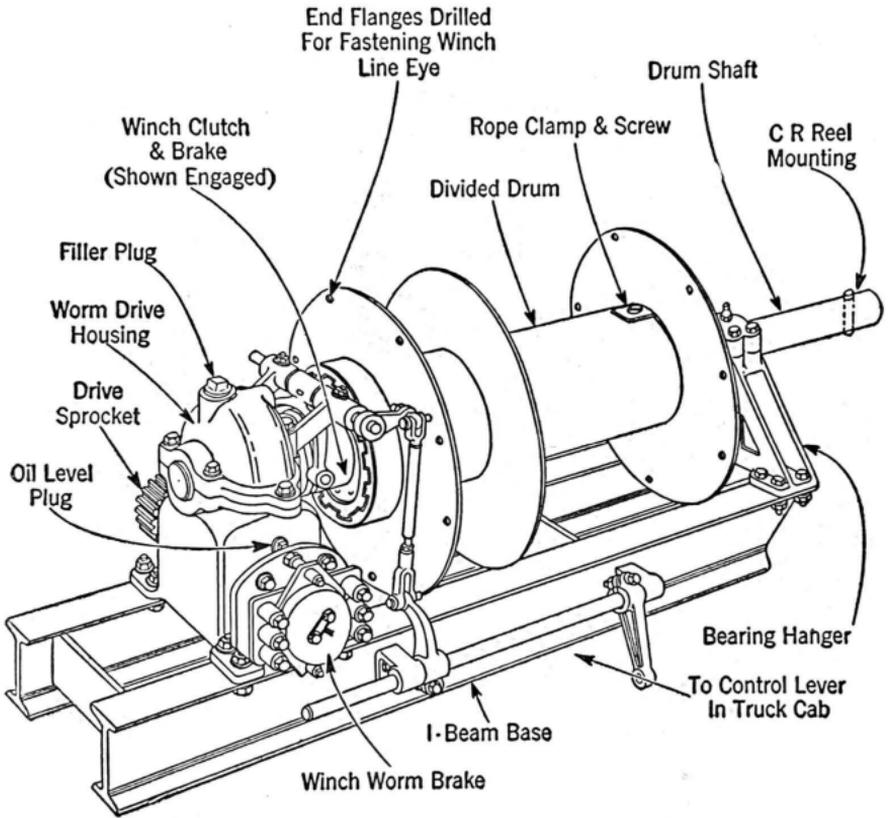
The winch clutch and brake shown in the following figure are in the free-drum position. The winch drum is 12 inches long with 19-inch diameter flanges, and has an 8-inch diameter spool, or body. An automatic worm brake is provided on the worm drive of the winch.



L12 OR L18 SINGLE-DRUM WINCH

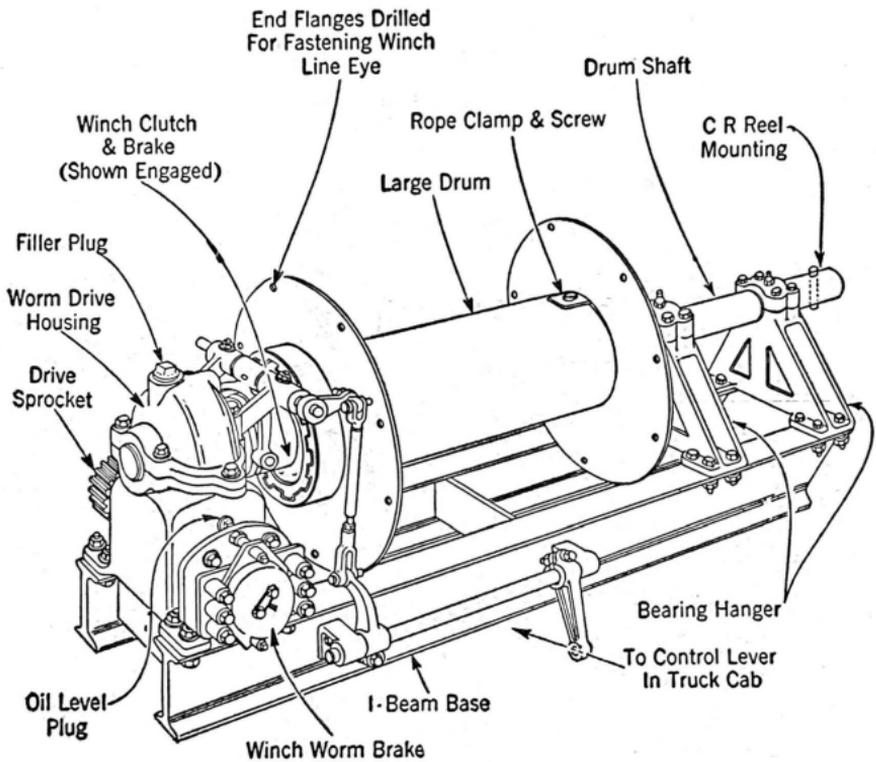
2.02 L18 Winch: This winch is identical in construction with the L12 winch described above, except that the winch drum is 18 inches in length between the flanges. Some L18 winches may be in use without the winch clutch and brake.

2.03 D Single-Drum Winch (Divided Drum): This is a newer type of winch which has all of the features described above, but also has a specially designed drum. The drum is 22 inches long between the end flanges and is divided into two separate winding spaces, 6 inches and 16 inches long, respectively, by means of another flange. This will permit the use of two ropes of different lengths on the drum.



**D SINGLE-DRUM WINCH
(DIVIDED DRUM)**

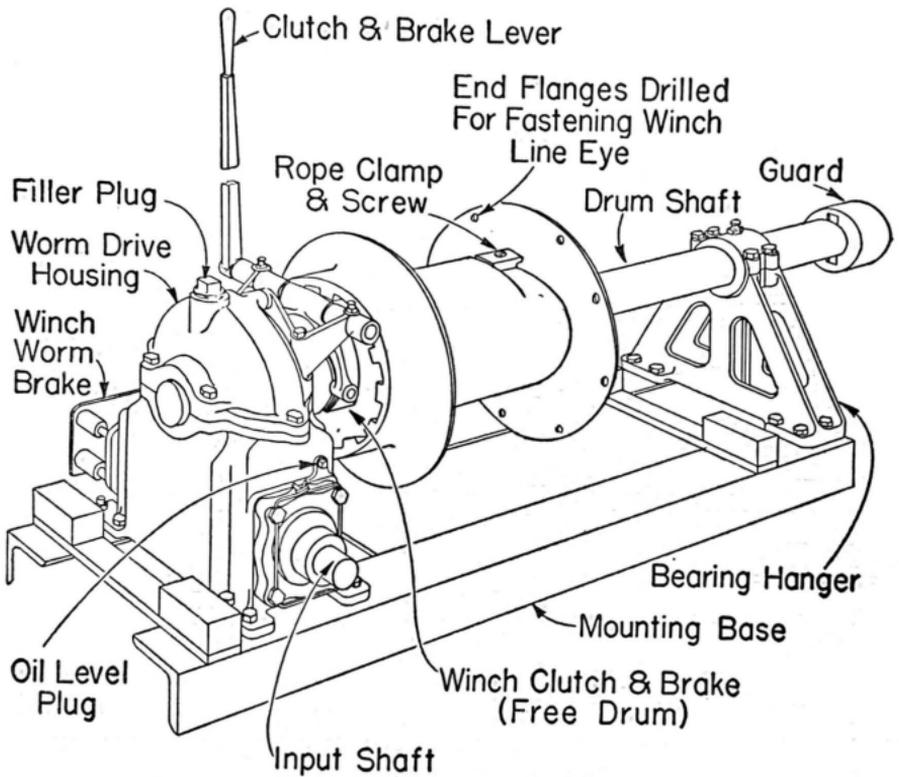
2.04 UG Single-Drum Winch: The UG Single-Drum Winch consists of the same elements as described for the winches on the preceding page. Its drum, however, has a clear width of 22 inches between the 19-inch diameter flanges, and an 8-inch diameter spool.



UG SINGLE-DRUM WINCH

2.05 FM-L12 winch is an L12 winch modified so that it can be mounted on the front end of a truck. The flange diameter is reduced from 19 inches to 14 inches with an 8-inch diameter spool. An optional feature on this winch is that the winch drum shaft may be extended to the left so that two CR Collapsible Power Reels may be mounted at the same time. An additional bearing hanger is required to support this shaft. A protective cap is placed on the end of these shafts so that clothing or other material will not get twisted around the

shaft and the CR Reel drive pin when the winch is turning. This cap is slipped over the winch shaft, pushed as far as it will go towards the winch and turned counterclockwise as far as possible. The winch clutch and brake are controlled by means of the lever shown in the figure below and can not be controlled from the cab.



FM-L12 WINCH

3. USE

3.01 Single-drum winches were designed for use on trucks equipped with M (middle type) derricks. The L12, L18 and UG winch drums will accommodate only a single length of wire rope winch line. These winches are suitable for use in aerial and underground cable placing and removal, and for general pole work.

3.02 The D Single-Drum Winch with divided drum was designed for use on line construction trucks. The divided drum permits the use of a length of winch line for such work as cable placing, this line being wound in the 16-inch space, while the smaller 6-inch long winding space permits the use of a short length of line exclusively for general pole work. This segregation of line according to use is of advantage in increasing the service life of the long rope, lessening the possibility of "losing a cable" because of using rope damaged during pole work and permitting two sizes of wire rope to be used. The longer length of the cable placing line carried will also permit longer reel lengths of cable to be placed in a single pull.

3.03 The FM-L12 winch was designed to be used with an LTF Derrick. It is suitable for use in aerial and underground cable placing and for general pole work but only carries a limited length of line.