

**POWER WINCHES
SINGLE-DRUM
DESCRIPTION AND USE**

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1. GENERAL

1.01 This section gives a general description and uses of the single drum winches used in the Bell System.

1.02 This section has been reissued to delete the L12, FML12, L18, and D single drum winches and to include the AT7897, AT8003, AT8029, and AT8467 winches. Since this is a general revision, arrows normally used to indicate changes are omitted.

1.03 The single drum winches described in this section are the AT8003, AT8029, AT8467, and the AT7897. The AT7897 is the worm winch that has been in use many years. Because of its reliability and exceptional service life, many are in use throughout the System; therefore, it has been included in this section.

1.04 The descriptions of the winches in this section are general. For more detailed information, such as capacity, speeds, safety precautions, operating the winch, inspection and maintenance routines, refer to the applicable sections listed below.

SECTION	TITLE
649-305-100	Winches and Power Takeoffs
649-305-102	AT8003 and AT8029 Winch

2. DESCRIPTION OF WINCHES

AT8003 Winch

2.01 AT8003 Winch (Fig. 1) is rated at 20,000 pounds, continuous duty. It can be driven mechanically by the trunk engine and power takeoff or with a power take-off driven pump supplying hydraulic fluid to a hydraulic motor attached to a hydraulic drive such as the AT8111 or similar variable speed transmission.

2.02 The winch consists of a drum, drum shaft, winch clutch and brake assembly, final drive and drive assembly, and the safety brake assembly. The hanger assembly and final drum assemblies support the drum shaft. The drum is driven through the winch clutch and brake, which can be activated mechanically or remotely by electric or electrovacuum controls. The safety brake automatically prevents the load from driving the drum and will hold the load when power is removed.

2.03 The winch is available with a 22-1/2 or 28-inch drum length. Both have 19-inch flanges and an 8-inch drum. The drum shaft is extended to accommodate the CR and RS power reels and the winch can be fitted with a suitable winch rope winder, such as the CH winch rope winder.

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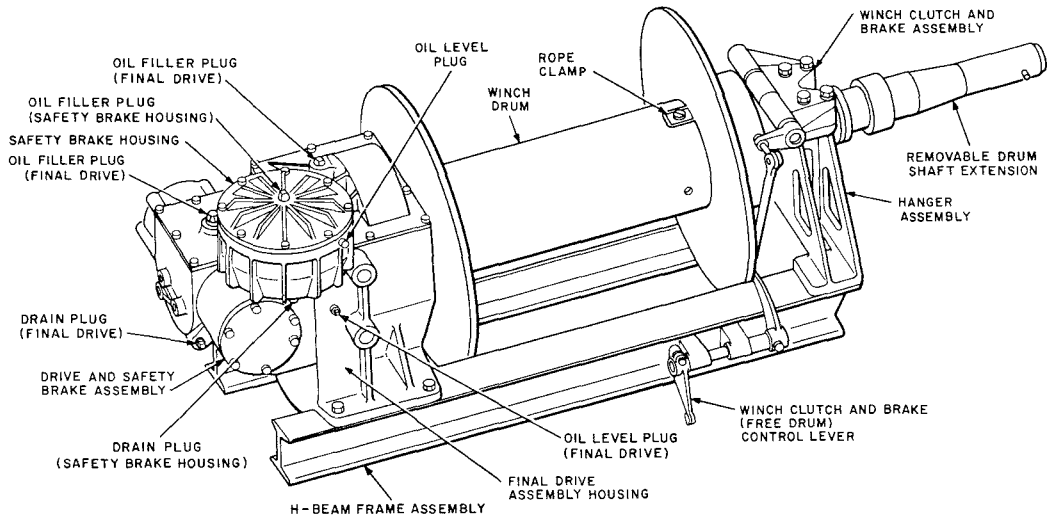


Fig. 1—AT8003 Winch

2.04 All winch assemblies are mounted on an H-beam frame which is attached to the vehicle chassis frame.

AT8029 Winch

2.05 The AT8029 winch (Fig. 2) is identical in size and construction to the AT8003 winch previously described except for the design of the drum.

2.06 The AT8029 winch has a divided drum and can be obtained with the drum divider on the left side or right side of the drum. The large section of the drum is 18 inches wide and the small section is 4 inches; the flanges are 19 inches and the drum is 8 inches in diameter.

AT8467 Winch

2.07 The AT8467 winch (Fig. 3) is rated a 10,000 pounds capacity and designed for continuous duty. This winch is driven by an integrally-mounted hydraulic motor that is operated by a power take-off driven pump. This variable displacement pressure compensated hydraulic motor is operated at a speed modulated by system hydraulic pressure. The

speed is varied automatically through a 3-to-1 range with torque varying proportionately, producing near constant horsepower.

2.08 The winch consists of a drum shaft and drum, hanger assembly, drive and final drive housing, safety brake, winch clutch and brake assembly, and the hydraulic motor. The safety brake automatically prevents the load from driving the drum and will hold the load when power is removed. The drum is driven through the winch clutch and brake assembly which can be operated mechanically, electrically, or by electrovacuum controls.

2.09 The AT8467 winch is available with a 16-inch or 22-1/2 inch wide drum. Both have 19-inch flanges and an 8-inch diameter drum.

2.10 The drum shaft is extended to the right and will accommodate the CR and RS power reels. This winch can be fitted with a suitable winch rope winder, such as the CH winch rope winder.

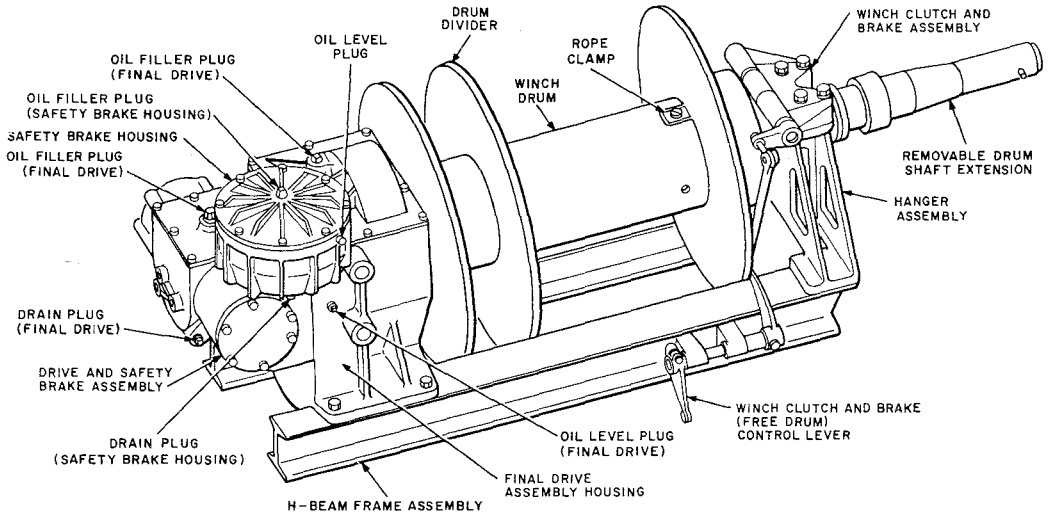
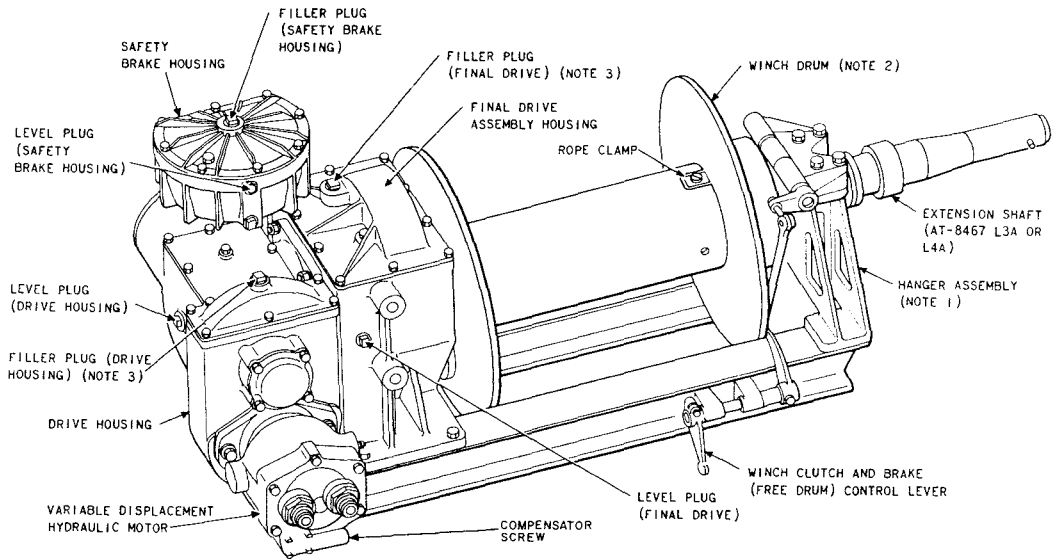


Fig. 2—AT8029 Winch



NOTES:

1. AT-8467 L2A WINCH HAS A SHORTER DRUM LENGTH THAN L1A WINCH AND UTILIZES TWO HANGER ASSEMBLIES TO SUPPORT DRUM SHAFT.
2. DRUM LENGTH IS 22-1/2 INCHES FOR L1A WINCH AND 16 INCHES FOR L2A WINCH.
3. FLOW-THROUGH OF LUBRICANT FROM FINAL DRIVE HOUSING TO DRIVE HOUSING ALLOWS BOTH HOUSINGS TO BE FILLED THROUGH EITHER ONE OF THE FILLER HOLES. HOWEVER, TO COMPLETELY DRAIN BOTH HOUSINGS, THE DRAIN PLUG ON BOTTOM OF FINAL DRIVE ASSEMBLY HOUSING AND TWO DRAIN PLUGS ON BOTTOM OF DRIVE HOUSING MUST BE REMOVED.

Fig. 3—AT8467 Winch

2.11 All housings and assemblies are supported on an H-beam frame which is mounted on the vehicle chassis frame.

AT7897 (UG) Winch

2.12 The AT7897 (UG) winch (Fig. 4) rated at 10,000 pounds capacity is a worm drive winch. It has a tendency to overheat on long pulls and is not recommended for sustained loading. It can be driven mechanically through a power takeoff or hydraulically with a power take-off driven pump supplying hydraulic fluid to a hydraulic motor and the AT8111 winch hydraulic drive or similar transmission.

2.13 The winch consists of the drum and drum shaft, worm drive housing, winch worm brake, and a winch clutch and brake assembly. The drum shaft is supported by the hanger assembly and the worm drive housing. The winch worm brake automatically prevents the load from driving the winch and will hold the load when power is removed. The drum is driven or free-spooled by the winch clutch and brake and can be activated mechanically, electrically, or by electrovacuum controls.

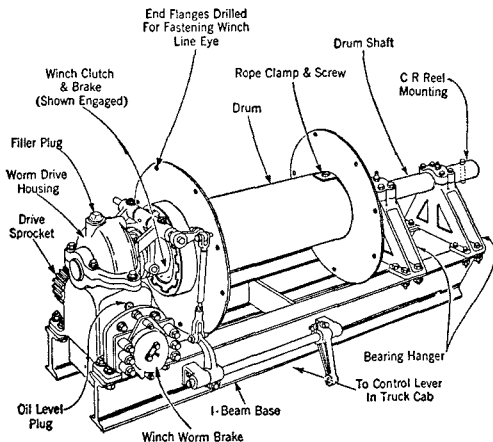


Fig. 4—AT7897 Winch

2.14 The AT7897 (UG) winch has a drum width of 22-1/2 inches, 19-inch flanges, and an 8-inch drum.

2.15 The drum shaft is extended to the right to accommodate the CR and RS power reels and the winch can be fitted with a suitable winch rope winder, such as the CH winch rope winder.

2.16 All assemblies are supported on two I-beams which are mounted on the chassis frame.

3. USE OF WINCHES

3.01 The winches described in this section are intended for mounting on the chassis frame of a suitable vehicle. The AT8003, AT8029, AT8467, and AT7897 (UG) winches are primarily used for placing and removing aerial and underground cables.

3.02 The AT8003, AT8029, and AT8467 winches are continuous duty winches. They can be used in work operations that require heavy pulling or sustained pulling within their rated capacity and will not overheat.

3.03 The AT7897 (UG) worm winch is subject to overheating on long pulls and is not recommended for sustained pulling work operations particularly at high loads.