

MODEL H90VS WINCH for Caterpillar D6R III & D6T Crawler Dozer

CARCO®

for CATERPILLAR

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MODEL DESCRIPTION

The H90 is a triple-reduction, hydraulically driven planetary winch. A modified spool section is installed in place of the ripper section in the tractor main hydraulic valve which will provide the winch motor with the maximum flow and pressure available. As the Carco H90 is hydraulically driven, no connection to the tractor PTO is required during installation.

The operator uses a console mounted joystick valve to obtain infinite winch speed control from 2 fpm (0.6 mpm) to 80 fpm (24 mpm). Load “fallback” is prevented by the sprag-type clutch in the multi-disc static brake. Moving the joystick away from the operator will release the drum clutch, built into the patented carrier clutch assembly, which allows the tractor to drive away from the load. A small rocker switch on top of the joystick handle turns on/off the “lock-in-low” solenoid valve which signals the variable displacement motor to stay in the maximum displacement (low speed, high line pull) position when continuous slow speed operation is required. (Refer to performance graphs)

Preventive maintenance is reduced to regular maintenance of the tractor hydraulic system and winch gear oil changes. There are **no mechanical adjustments required on the winch**. Anti-friction roller bearings and shaved planetary gears assure high efficiency and quiet operation. A roller fairlead is built into the winch case as standard equipment to protect the winch and reduce wire rope wear. The heavy-duty single horizontal roller supplied can be placed in either the high or low position. An optional fourth roller is available.

SPECIFICATIONS

GENERAL SPECIFICATIONS

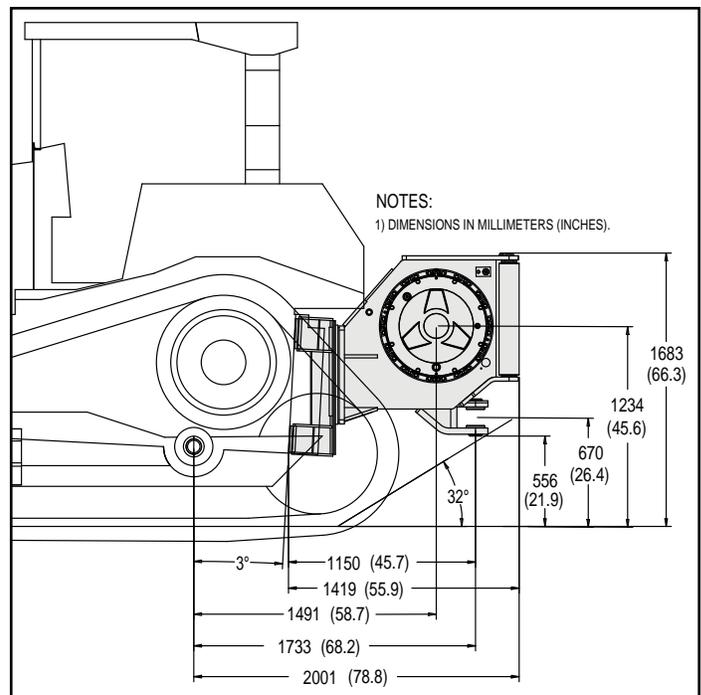
Overall Winch Gear Ratio	212:1	
Throat Clearance	8.50 in.	(216 mm)
Cable Drum Barrel Diameter	12.5 in.	(318 mm)
Cable Drum Flange Diameter	24.00 in.	(610 mm)
Cable Drum Barrel Length	9.00 in.	(229 mm)
Gear Oil Capacity	12.5 qt.	(12 L)

HYDRAULIC SYSTEM

- Infinitely variable 80 cc piston motor with patented Braden brake valve.

OPTIONS

- One additional horizontal fairlead roller
- Free Spooling Drum



Approved Cable Diameters	Maximum Theoretical Cable Capacity per SAE J1158†	Maximum Recommended Cable Capacity per SAE J706†	PACCAR Ferrule Part Number ‡
7/8 in (22 mm)	291 ft (89 M)	204 ft (62 M)	--
1 in (26 mm)	226 ft (69 M)	186 ft (57 M)	29427
1-1/8 in (29 mm)	180 ft (55 M)	128 ft (39 M)	29428

† Refer to PACCAR Publication LIT2435 for more information on proper wire rope selection for PACCAR Winches.

‡ Use six-strand IWRC RRL Wire Rope with PACCAR Ferrules.

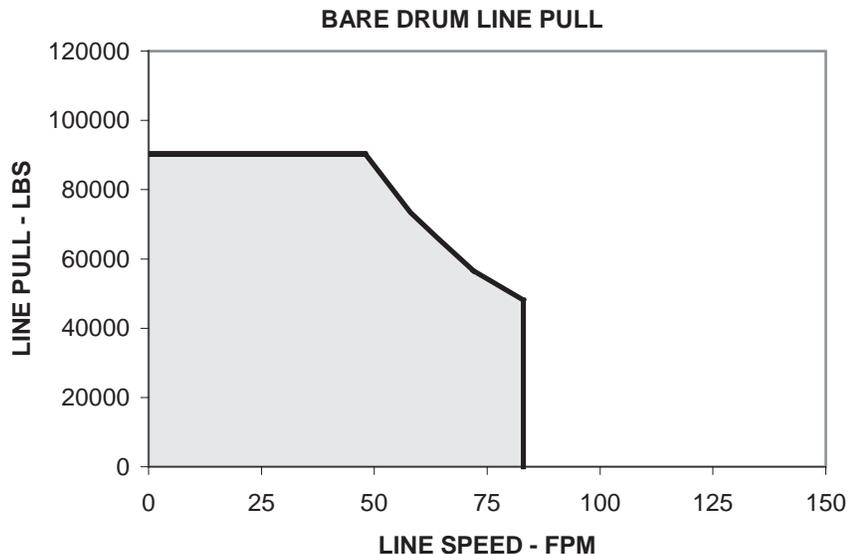
PACCAR WINCH DIVISION
P.O. BOX 547 BROKEN ARROW, OK U.S.A. 74013
PHONE (918) 251-8511 FAX (918) 259-1575
www.paccarwinch.com

PERFORMANCE GRAPHS

Winch performance graphs based on utilization of the full flow and pressure available from the tractor high pressure hydraulic system. Performance data is calculated using 1 in. (24 mm) wire rope.

Maximum rated line pull is 90,000 lb (41064 kg) and maximum warrantable cable diameter is 1-1/8 in. (29 mm).

Winch Performance based on 55 gpm (196 lpm) @ 5500 psi (380 bar)



The H90 winch is capable of operating anywhere in the areas under the curves shown on the above graphs. With load sense hydraulics, the tractor piston pump supplies only the flow required for the work function (winch). This allows the operator to creep a load for an extended period of time without adding any heat to the tractor hydraulics.

Hydrostatic steer tractors have adequate hydraulic cooling to meet the winching demand. Since paying-out is the only winch operation that generates heat, the heat can be further reduced by releasing the drum clutch to drive away from a load rather than paying-out cable.