

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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AUXILIARY HYDRAULIC WINCH DRIVE

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1. GENERAL

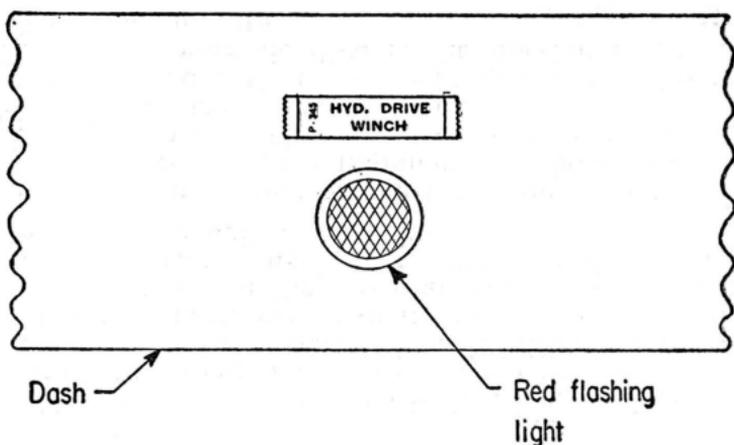
1.01 The auxiliary hydraulic winch drive, used on construction trucks equipped with hydraulic power, provides an accurate control of the winch. It is an additional drive arrangement and may be used instead of the mechanical drive for those work operations where the more accurate control of the line or the operation from outside of the cab is desirable and where the speed and line pull are adequate.

1.02 The maximum pull on the winch line which can be obtained from this equipment is about 5,000 pounds. When used with the smaller pump on a truck equipped with a derrick only, the maximum line speed is about 20 feet per minute. When used with a truck equipped with a larger pump to operate a B hydraulic digger, the maximum line speed is about 35 feet per minute.

2. PRECAUTIONS

2.01 It is very important to shift the hydraulic winch drive out of engagement when the mechanical drive is used. If not disengaged the winch drive motor will operate as a hydraulic pump at four times normal speed and considerable damage to the motor and drive may result.

2.02 The red flashing light on the dash indicates when the hydraulic drive is engaged and should be observed as a warning whenever the mechanical drive is used.

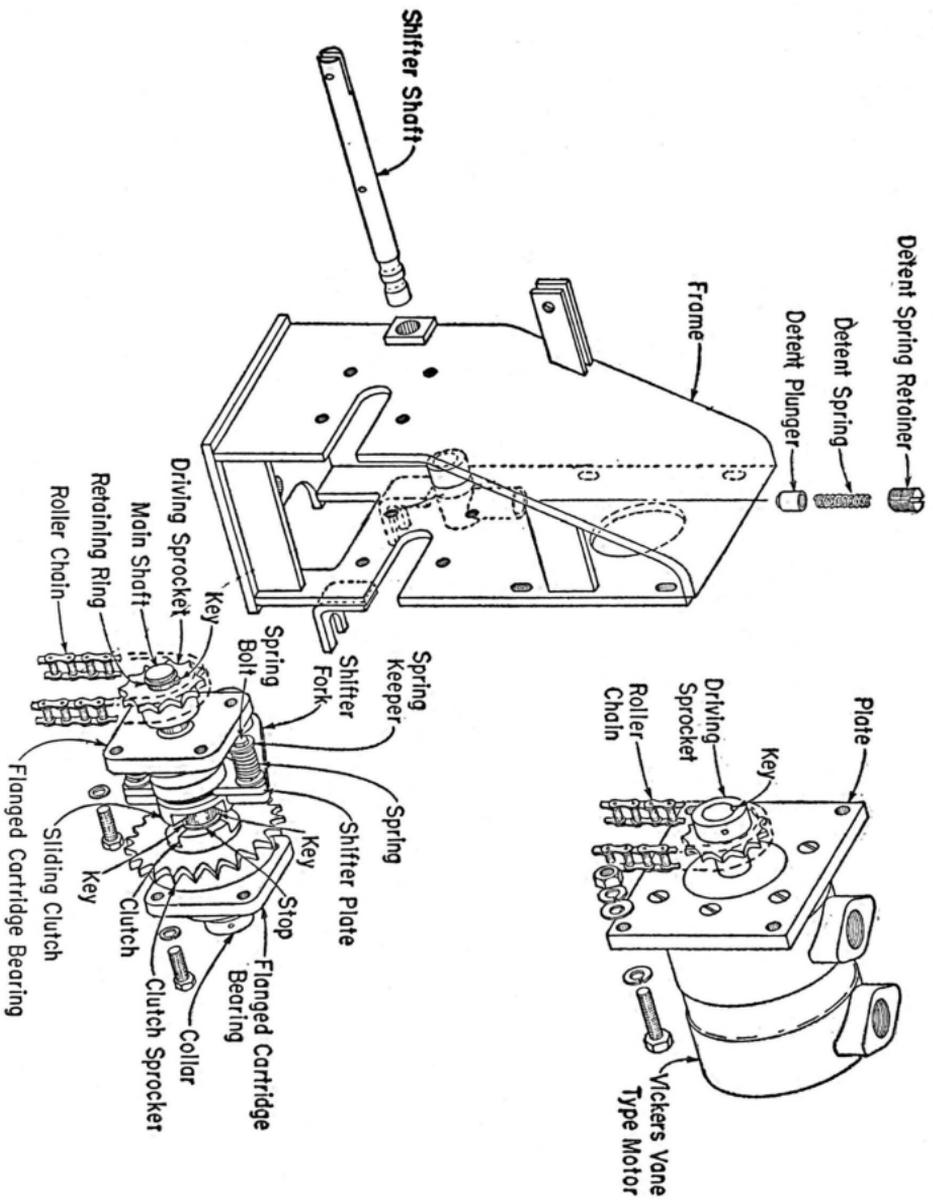


2.03 No damage will be done to the equipment if an attempt is made to pull an excessive load with the hydraulic drive since the hydraulic relief valve protects the system. However, the operating valve lever should not be held with the relief valve bypassing the hydraulic oil for any extended length of time, since this will develop excessive heat in the hydraulic system.

2.04 All precautions pertaining to winch operations in general should be observed in connection with the use of this equipment.

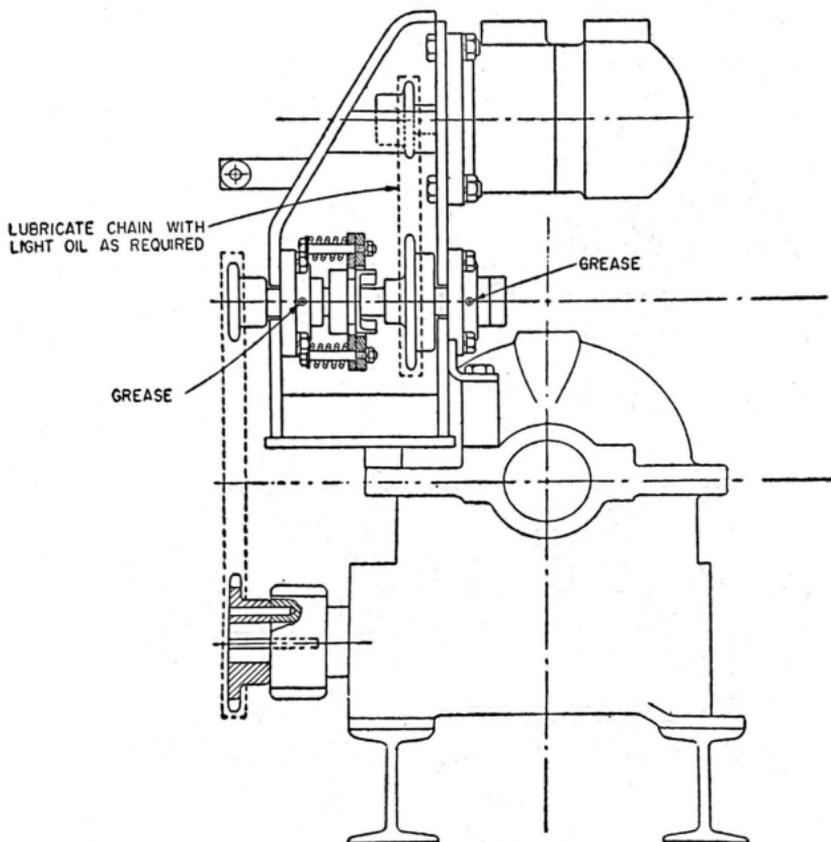
3. NAME OF PARTS

3.01 The following figure gives the general arrangement of the equipment and the names of the parts which may be required for replacement or repair.



4. LUBRICATION

4.01 The following figure outlines the lubrication procedure for the hydraulic drive.



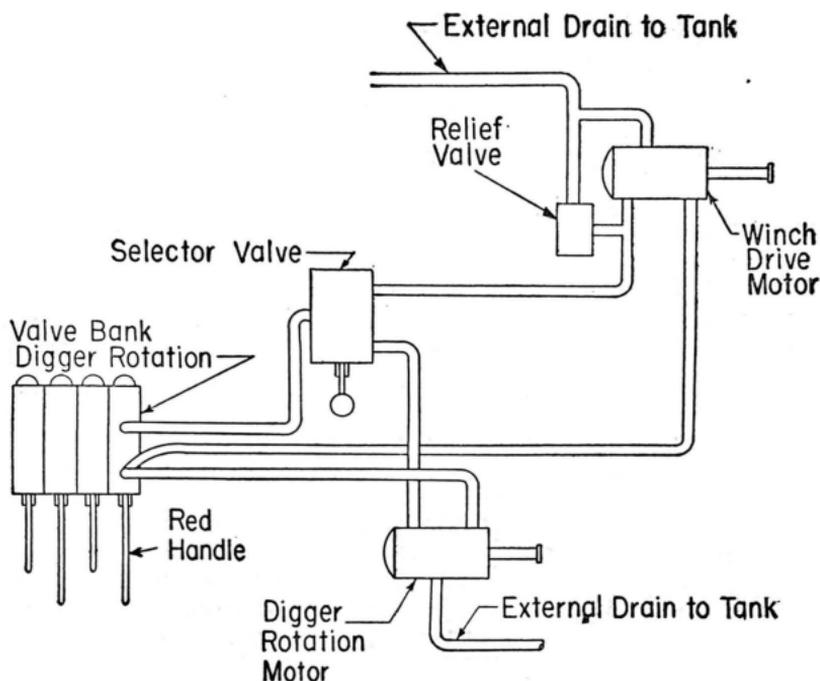
5. OPERATION

5.01 The hydraulic winch drive can be operated only from the location of the hydraulic bank valve assembly.

5.02 To utilize this drive, the hydraulic pump should be engaged and the clutch connecting the hydraulic drive to the winch should be engaged.

5.03 The clutch connecting the hydraulic drive is spring loaded so that if the jaws are not in the proper position to engage, the shifter mechanism may be moved to the full extent of its travel and engagement will be automatic as soon as the hydraulic motor rotates a few degrees.

5.04 On a truck equipped with a digger, the selector valve which connects the hydraulic power to either the winch or the auger rotation motor should be shifted to the winch drive position. The open center spool of the hydraulic valve bank (red handle) then is in control of the winch drive motor.



5.05 On trucks equipped with a derrick only, no transfer valve is used since a four-spool valve is used and the red handle section of the valve is connected direct to the winch drive motor.

5.06 Pulling up the handle takes in on the winch line and pushing down on the handle runs the winch in reverse.

5.07 The hydraulic control valve should be moved slowly so that the desired winch control can be obtained.

5.08 The operation of this hydraulic drive is similar to the other hydraulic equipment in that the engine should be brought up to proper operating speed by setting the remote governor control before full performance of the drive is obtained.