

GMP

Model UV-25
Universal Swivel Sheave
P/N 70202
Installation, Lubrication and
Parts Manual

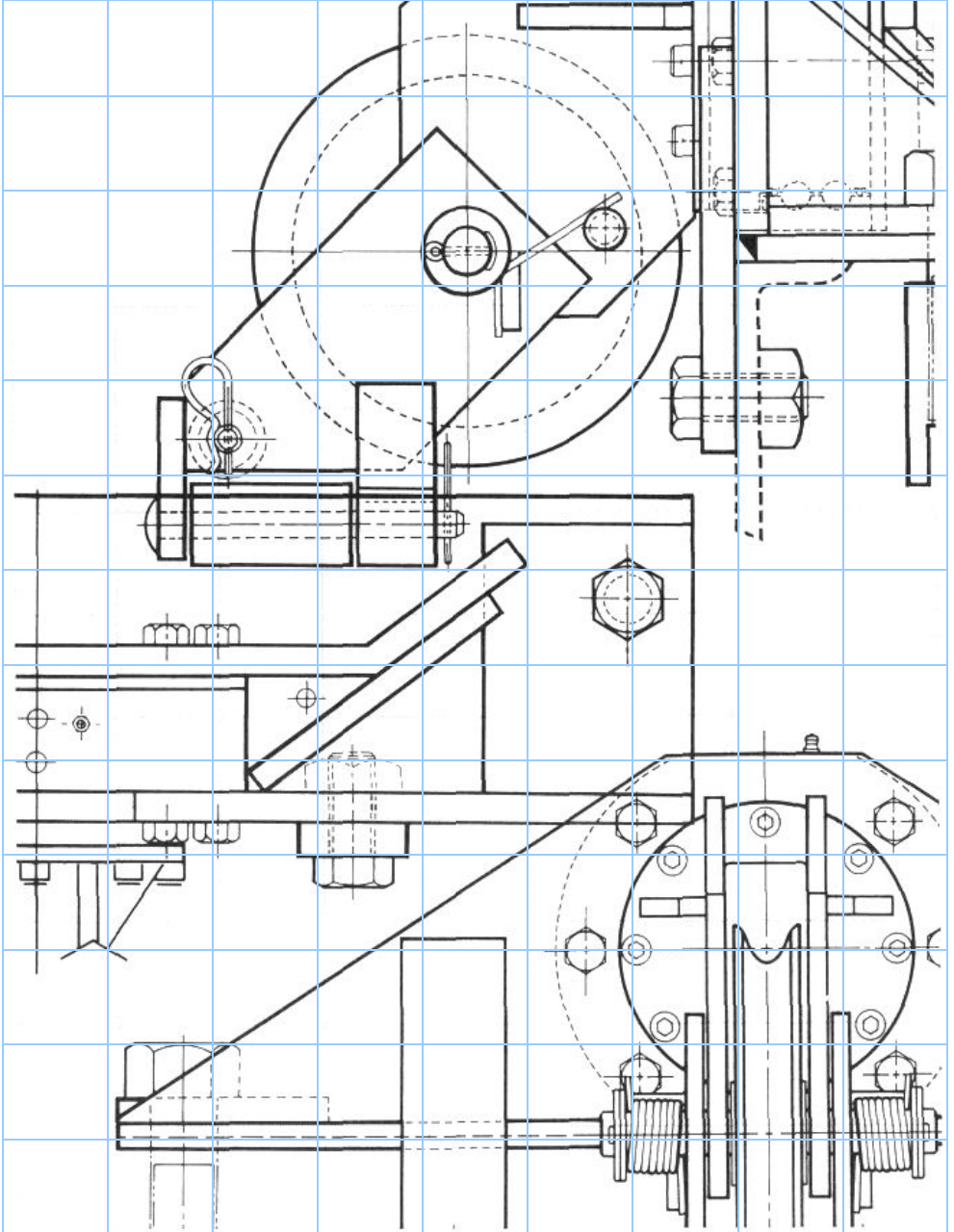


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General

The Model UV-25 Universal Swivel Sheave is designed to swivel 360° and accept wire rope up to 9/16, in. (14 mm) diameter. The maximum-rated winch line pull for underground applications is 25,000 pounds-force (111,205 N-force); and for over head applications 14,000 pounds-force (62,000 N-force). The unit weighs 130 lbs. (59kg).

 Precautions

GMP has designed and manufactured the Model UV-25 sheave consistent with sound engineering and manufacturing procedures. However, because of the nature of the product's use, extreme caution should be exercised during installation and operation. Use only the recommended mounting sockets and bolts described on page 4 of this manual. Check each mounting bolt for tightness periodically depending on the amount of use. Make certain that the body structure to which the sheave is to be mounted is sufficiently strong to withstand the 25,000 pounds maximum allowable load to the sheave.

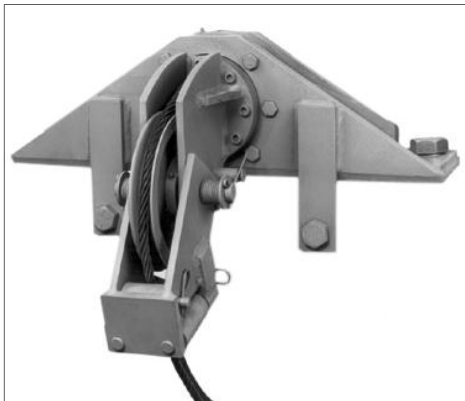
Never load the UV-25 Swivel Sheave or the wire rope beyond their rated capacity.

The Model UV-25 Swivel Sheave should not be used when the required rope diameter exceeds 9/16 in. (14mm).

Stand clear of loads suspended by the winch line. Do not stand inside of angles formed by the winch line. As much as possible, do not stand where there is the danger of being struck by the wire rope if it should fail or snag. Never place hands on a moving winch line. Always stand clear of moving winch line. To prevent entanglement in moving parts and possible serious injury, do not wear loose-fitting clothing when working around the swivel sheave, wire rope and winch.

Wire rope (winch line) passing through the swivel sheave may be old, damaged or weakened by such defects as kinks, cuts, extreme bends or loops. Such conditions are potentially dangerous and detrimental to safely operating the sheave. The wire rope must be routinely inspected at regular intervals and replaced when worn. Make certain that the eye at the end of the winch line is properly spliced or swaged.

It is imperative, and the responsibility of the operating company, that the crew be properly instructed about the safe working capabilities and operational limitations of the sheave, the winch and especially the winch controls. The operator should never leave his position at the controls while the winch line is under load.



Installation

The sheave assembly is normally mounted on the body deck at the most rearward position of the tail shelf. The center-line of the sheave, truck body and winch drum should all be consistent with the centerline of the chassis frame.

Place the sheave assembly on the tail shelf as described above. Note the four mounting holes— two major holes in the horizontal plane and two minor holes in the vertical plane. Using the mounting holes as a template, drill two 1 3/8 in. diameter holes in the horizontal section and two 15/16 in. diameter holes in the vertical section.

Two zinc alloy mounting sockets (P/N 15836 - two required) are supplemental to the sheave assembly itself. Using the two drilled holes in the diamond plate as a location guide, bolt the two sockets to a sufficiently strong section of the body to withstand the maximum allowable load of the sheave. The top surface of the sockets should be mounted so that they are ultimately snug against the underside of the diamond plate.



Place the sheave assembly on the tail shelf. Screw the two 1 1/4 in.-7 x 4 in. long, Grade Eight bolts (P/N 17746) into their mounting sockets. Place the two 7/8 in. -9 x 2 in. long Grade Five bolts (P/N 17729) into the holes in the vertical section of the tail shelf with the heads outboard. Attach the nuts and tighten snugly. Tack weld both nuts in place. Recheck all four bolts according to the following torque values:

1 1/4 in. diameter bolt
@ 190 foot pounds (257 Nm)

7/8 in. diameter bolt
@ 85 foot pounds (115 Nm)

For additional details refer to drawings on pages 6 and 7.

Lubrication

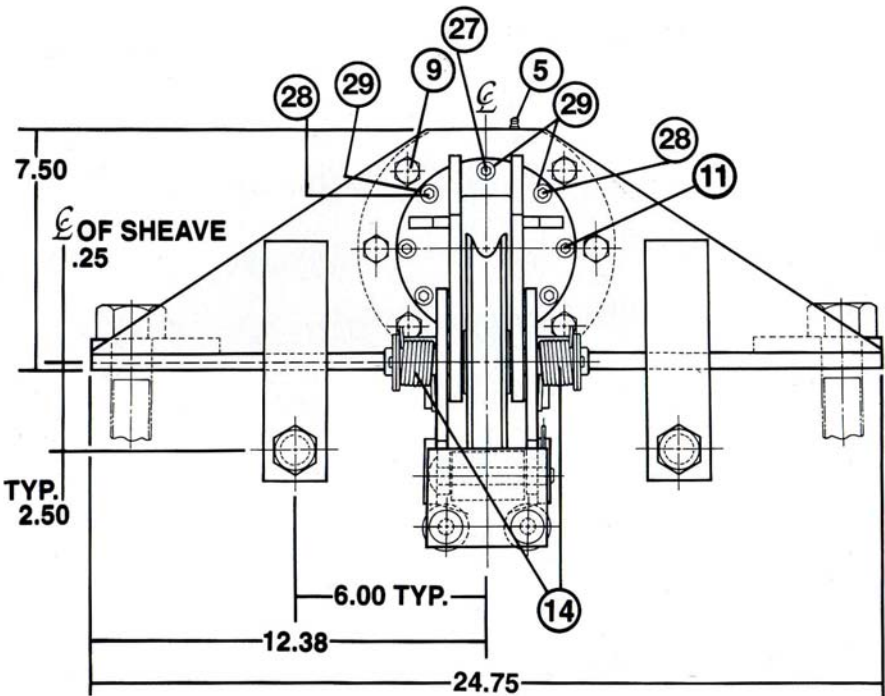
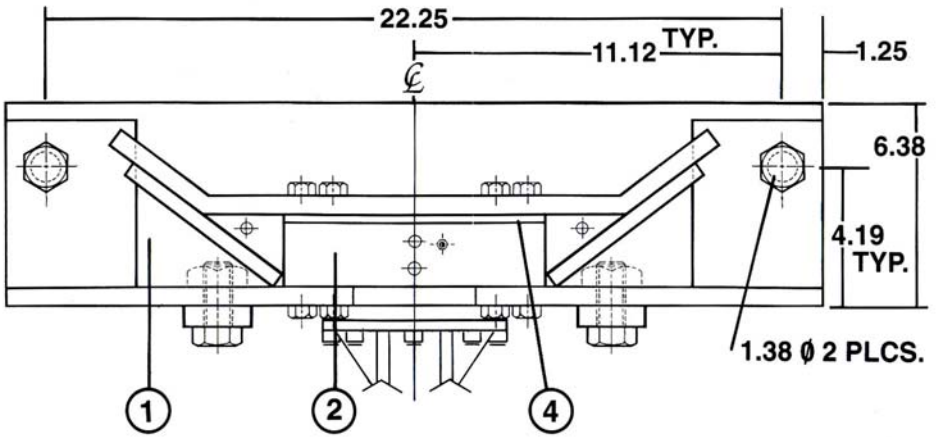
The Model UV-25 sheave assembly has two locations to be lubricated:

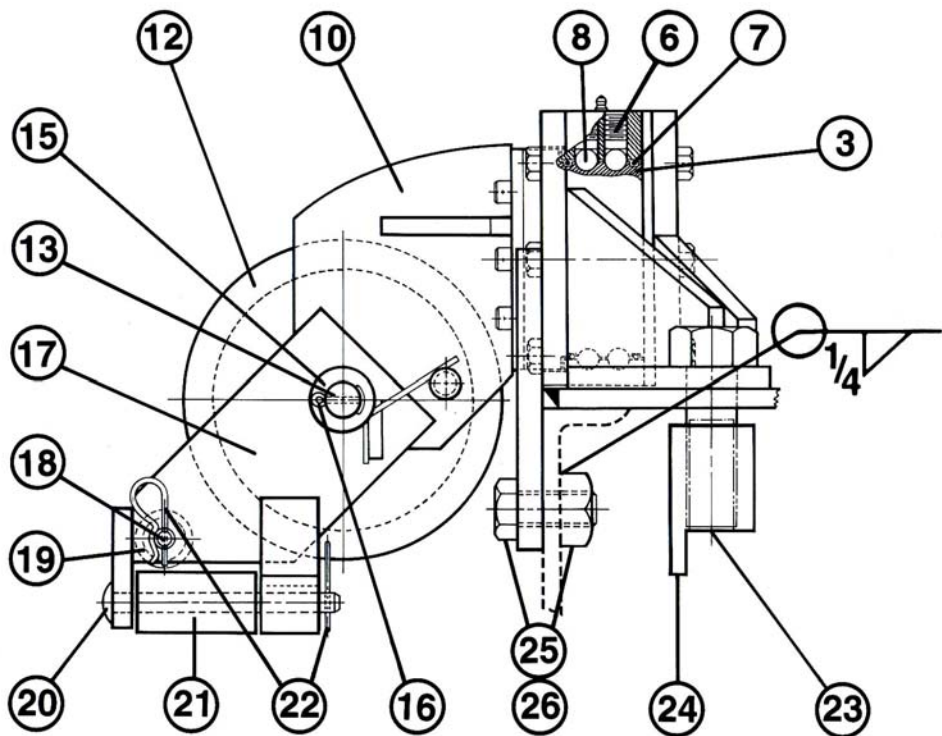
- a. The ball bearing chamber between the inner and outer race.
- b. The hub section of the bearing in the sheave.

Both of these lubrication areas are lubricated at the factory during assembly. Subsequent lubrication checks should be periodically performed consistent with the working loads applied and the amount of time in service. However, both lubrication areas should be checked and lubricated as follows not less than every six months:

Ball Bearing Chamber - The lubrication fitting is located at the top of the outer sleeve. The grease fitting is not a ball check type. Forcing too much grease under pressure when lubricating the chamber may distort the "O" ring on both sides of the chamber. As a precaution, first remove the two set screws on top of the outer sleeve. Inject lithium based grease into the fitting, while rotating the swivel section several times as you proceed. When grease becomes apparent at the top of the chamber, stop lubrication. Replace the two set screws.

Sheave - The bearing in the sheave is also initially lubricated at the factory. The lubrication fitting, located on the hub section of the sheave, is not a ball check type. Inject lithium based grease into the fitting, until excess grease is visible between the bearing and shaft. The maintenance of any mechanical device should be on-going. The operator should always be aware of lubricant leakage or difficulty in rotating the swivel section. Units which exhibit such operational problems should be removed from service and repaired by a qualified mechanic or the factory. To achieve maximum life expectancy, it is suggested that the springs, rollers and pins be sprayed periodically with a light lubricant such as CRC 3-36 or WD-40.





Parts can be ordered from your local dealer or from the factory.

Item #	Item	Qty.	P/N	Item #	Item	Qty.	P/N
1	Base Weldment	1	15614	15	Plain Washer	2	16749
2	Outer Sleeve	1	15835	16	Cotter Pin	2	16811
3	Inner Sleeve	1	15815	17	Lower Weldment	1	30211
4	Spacer Plate	1	24128	18	Pin	1	24610
5	Lube Fitting	1	16977	19	Upper Roller Assy.	1	15612
6	Set Screw	2	17578	20	Pin	2	24609
7	O-Ring	2	16817	21	Lower Roller Assy.	2	15613
8	Hardened Stl. Ball	58	16678	22	Hair Pin Cotter	3	17640
9	Hex Hd. Cap Scr.	12	16635	23	Hex Hd- Cap Scr. 1 1/4"-7x4Gr8	2	17746
10	Upper Weldment	1	30210	24	Socket, Bolt Block	2	15836
11	Soc. Hd. Cap Scr.	5	16812	25	Hex Hd. Cap Scr. 7/8 -9x2 Gr5	2	17729
12	Sheave w/Bearing, Sleeve & Fitting	1	26102	26	Hex Nut 7/8-9	2	17730
13	Sheave Shaft	1	15827	27	Soc. Hd. Cap Scr.	1	30022
14	Spring, right hand	1	24600	28	Soc. Hd. Cap Scr.	2	25337
14	Spring, left hand	1	24601	29	Washer	3	30021

Model UV-25 Specifications

Weight: 130 lbs. (59kg)

Max. Winch Line Pull, underground: 25,000 lbs. (111,205 N)

Max. Winch Line Pull, overhead: 14,000 lbs. (62,205 N)

Max. Wire Rope Diameter : 9/16" (14 mm)

Sheave: Hardened Steel

Finish: Zinc chromate primer

Fasteners: Certified in compliance with SAE J429

Mounting Sockets: Two corrosion-resistant zinc alloy sockets

Mounting Location: Tail shelf

Swivel: 360 degrees

Rotation: 58 anti-friction hardened steel balls

Rollers: All rollers are removable for passage of wire rope eye



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