

LADDER, ROLLING
LUBRICATION AND INSPECTION

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1. GENERAL

1.01 This section presents the procedure for lubricating and inspecting rolling ladders. It is intended for all types of rolling ladders, and includes maintenance of rolling ladder brake assemblies.

1.02 Under normal conditions a ladder will not need lubricating as often as a general inspection. When lubrication is necessary, care should be exercised not to apply excess lubricant. Excessive lubrication causes dust and dirt to collect.

1.03 For assembly and installation information, or adjustment procedures, refer to Sections 237-200-202, and 237-200-203 respectively.

2. TOOLS AND MATERIALS

2.01 The following tools and materials will be required to perform the procedures covered in this section:

- (a) Screwdriver, Tel, 6 in - Klein 601-6 or equal.
- (b) Wrench, Adjustable, 6 or equal.
- (c) Cloth, Polish, Impreg, KS-14668 or equal.*
- (d) Can, Oil, Pump, 6 oz. Eagle 33-F or equal.
- (e) Petroleum, Plastic, Spec. 5694, H-7861 2-47.
- (f) Oil, SAE No. 30.
- (g) Rope, Manilla, 1/2"*. *

3. INSPECTION

Ladders

3.01 Wipe the dust and dirt from the surface of the ladder, and hand rail. Use a KS-14668 polishing cloth.

3.02 Wipe the dirt and grease, if any, from the surfaces of the wheels and wheel assembly. Use a KS-14668 polishing cloth.

NOTE: Separate cloths should be employed for the above functions, as the cloths used in each step may become excessively soiled.

3.03 Check that the wheels and wheel assemblies are free from any foreign material. Remove all wire, string etc., from the wheel assemblies.

3.04 A general overall inspection of the ladder should be made. Check that all screws, nuts, and bolts are tight. Check and tighten all wood screws on the ladder and hand rail assembly. Check and tighten all bolts on the ladder, wheel assembly, hand rail assembly, mounting assembly, etc.

Ladder Track

3.05 In checking the ladder track, walk the ladder the full length of the track. While doing this,

* As Required

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observe that the trolley assembly does not bind on the lower inside edges of the track.

3.06 If the trolley assembly binds on the lower inside edges of the track, the track may need spreading. To spread the track, place a screwdriver inside the track and pry open the lower edges.

Brake Ropes

3.07 Check the ladder brake ropes (if any) for signs of wear. If a brake rope is frayed or worn, it should be replaced.

Ladder Brake

3.08 Check the rolling ladder brake. If the ladder contains a brake, make certain that the ladder brake arm operates by pulling on brake ropes. If a brake arm does not move with a minimum amount of force, the moving parts of the brake should be lubricated. For lubrication of ladder brake, refer to Part 4 of this section. With the brake released walk the ladder the full length of the ladder track. While rolling the ladder the brake should not hinder the movement of the ladder in the track. Set the brake. (This position will tend to lock the ladder in place.) Try to move the ladder. There should be a considerable amount of force needed to move the ladder with the brake set. If the ladder is easily moved, there may be grease in the ladder track.

Grease On Ladder Track

3.09 To remove grease from the ladder track, use a KS-14668 polishing cloth, and a screwdriver. Place the cloth (folded several times) against the ladder track. Push the cloth into the track with the screwdriver. Slide the cloth along the inside of the track with the screwdriver. After cleaning the track, recheck the holding ability of the brake. The track may require more than one cleaning to remove all the grease.

4. LUBRICATION

Floor Wheels

4.01 Check that the floor wheels revolve freely. Check also the type of wheel involved. Some ladders have metal wheels with rubber tires. Some ladders have solid rubber composition wheels.

NOTE: Do not lubricate the solid rubber type wheel. The rubber wheels contain sealed bearings and require no supplemental lubrication.

Rubber Type Wheels

4.02 If a solid rubber type wheel does not revolve freely, check that the wheel assembly is free of foreign material. If it appears that the bearing is binding, the wheel should be replaced.

Metal Type Wheels

4.03 If the metal type wheel with rubber tires does not revolve freely, check that the wheel assembly is free of foreign material. If it appears that the bearing is binding, the wheel should be lubricated.

4.04 If the ladder has the old type metal wheels, the type without the grease cups, the wheels should be oiled.

4.05 To oil the old type metal wheels, without grease cups, use the oil can and place a few drops of the SAE No. 30 oil on each end of the axle. Place the oil between the mounting fixture and the wheel. Refer to Figure 1. Avoid excess oiling of the wheels. If excess oil is applied it may drip on the floor or on the tires.

4.06 If the ladder has the new type of metal wheels, the type with the grease cups, the wheels should be greased.

4.07 To grease a new type of metal wheel, tighten the grease cup. Tighten the grease cup until a small amount of grease appears on the axle. Refer to Figure 2. If a cup is tightened to the limit, remove the cup, fill the cup, and replace the cup. Fill the cup with plastic petroleum. Avoid excess lubricant as it tends to collect dust and dirt.

Pivot Mounted Wheel Assembly

4.08 If a wheel assembly is mounted so that the assembly can pivot, the pivot assembly should be lubricated.

4.09 To lubricate a pivot assembly, use the oil can and place 1 or 2 drops of the SAE No. 30 oil between the mounting plate and the pivot plate directly above the pivot screw. Place 1 or 2 drops

of the SAE No. 30 oil in the pivot plate slot, near the stationary screw. Refer to Figure 3. Wipe off any excess oil, as it will tend to collect dust and dirt. Use the KS-14668 polishing cloth to wipe off the excessive oil.

Wheel Assembly

4.10 Check to see if the trolley wheels need lubrication. This can be accomplished by walking the ladder along the entire length of the track. If the wheels squeak, slide, or hinder the movement of the ladder, the trolley wheels need lubrication. Remove them from the track, if any of the aforementioned problems occur, and lubricate them.

4.11 To remove the trolley assembly from the track first roll the ladder to the end of the track. Choose the end of the track that will permit

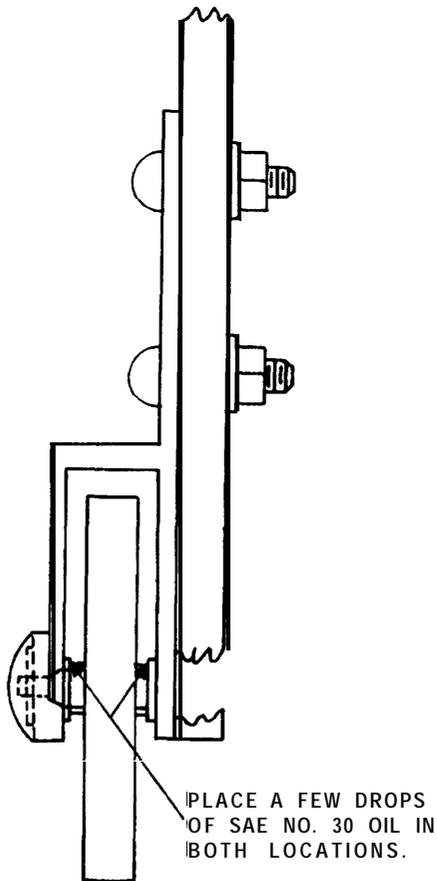


Figure 1. Lubrication of the Old Type Metal Wheel.

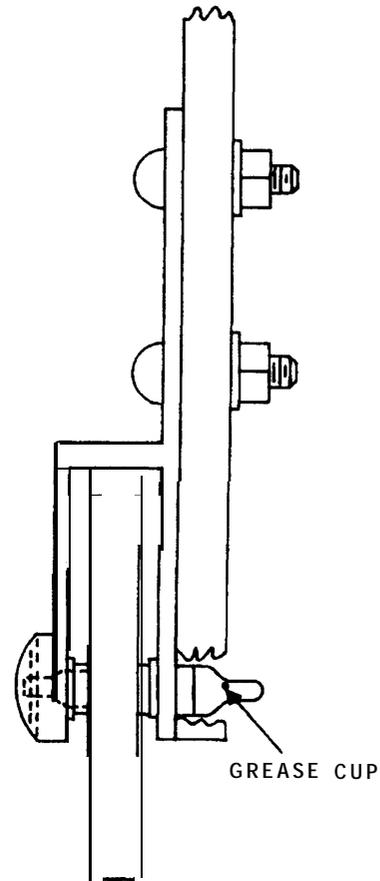


Figure 2. Lubrication of the New Type Metal Wheel.

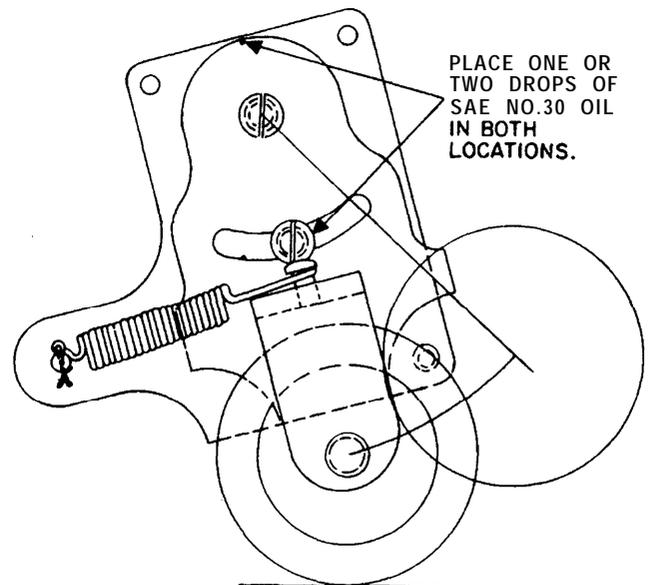


Figure 3. Lubrication of Pivot Mounted Wheel Assembly.

the easiest removal of the trolley assembly. For example, one end of a track may be butted against a wall. This would make it easier to remove the trolley assembly from the other end of the track.

4.12 Take a piece of 1/2 inch rope and loop it over the ladder track. Place the rope behind a track support or brace. This will prevent the rope from sliding off the end of the track. Tie the rope securely to one of the upper steps of the ladder. Remove the ladder stop from the ladder track. If necessary, use a second ladder to remove the ladder stop. While supporting the ladder from the floor with the rope, push the ladder out of the track. Play the rope out slowly allowing the ladder to be lowered to the floor.

WARNING: Do not leave the ladder or track unguarded after the stop has been removed.

4.13 Using the index finger, push grease into the bearings of the wheels. Avoid excess lubrication since the inside of the track should remain free from grease. Use plastic petroleum to grease the wheel bearings. Wipe the excess grease off the trolley assembly using a clean KS-14668 polishing cloth. If the trolley assembly is equipped with a brake, make certain that the brake shoe is wiped clean.

NOTE: There should never be any grease on the brake shoe, as this could allow the brake to slip.

4.14 Restore the ladder to the ladder track. Pull the ladder up by the rope and steer the trolley assembly into the track. After the trolley assembly is placed properly in the track, immediately install the ladder stop. Roll the ladder along the track for a few feet to work the grease into the bearings.

WARNING: Make certain the ladder stop is placed in the track immediately. Make certain the stop is fastened securely.

Brake Assembly

4.15 If necessary, the brake assembly is lubricated to help free the movement of the brake arm. To lubricate the brake assembly, use the oil can and the SAE No. 30 oil. Place one drop of oil on each side of the brake shoe shaft directly above the lever arm. Place one drop of oil on each side of the brake shoe shaft directly above the spring mount. Refer to Figure 4. Avoid excess lubricant, as it tends to collect dust and dirt. Wipe all excess oil off of the trolley assembly.

5. REPORTS

5.01 Complete the necessary reports in accordance with the appropriate section of the 220 Division of GTE Practices.

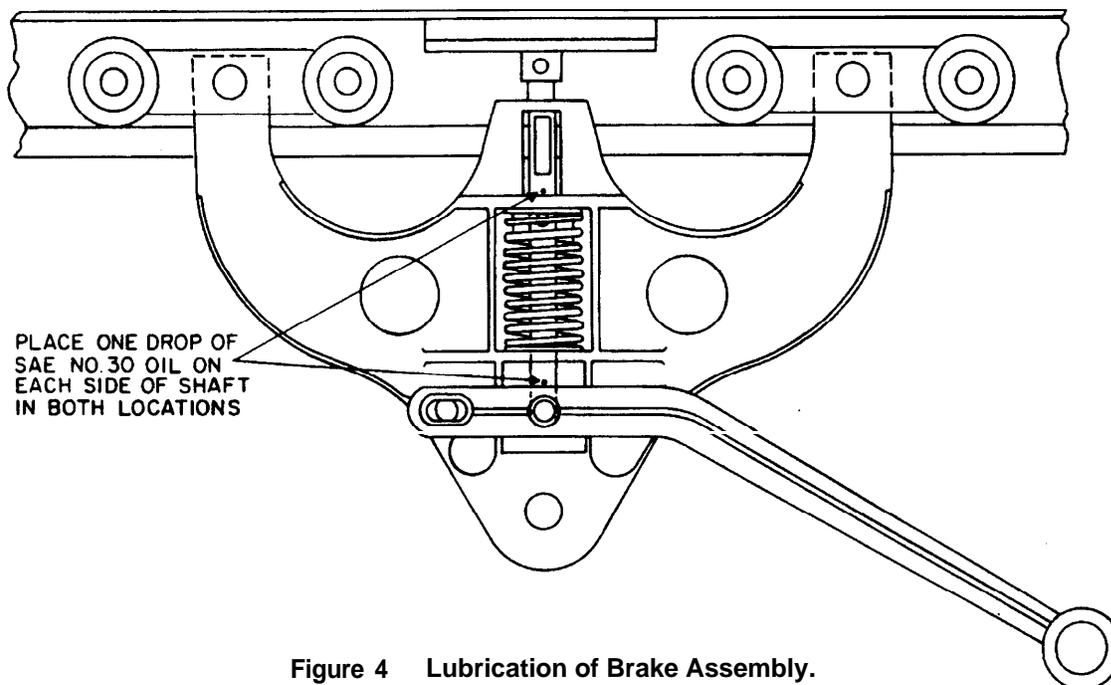


Figure 4 Lubrication of Brake Assembly.