

(6) V-BELT SPEED REDUCER

With increasing public awareness of noise, our engineers have developed a V-belt drive to reduce operating noise levels.

This new drive produces much lower noise levels than those obtained from conventional gear drives of the equivalent size. The V-belt is a wide angle (60°C) and is made of a special polyurethane compound with polyester tension cords (tensile member). Very compact V-belt drives are possible with this belt.

The life of the belts depends on the maintenance of proper tension. The adjusting gauge is factory set and should not be altered.

6.2 Testing of Drive Operation

After checking the belt adjustment, spin the fan by hand to see whether it is free. If it spins freely and smoothly, start the fan motor. After 2 to 4 hours operation, check amperage and voltage and compare the readings with motor nameplate data. Check the motor temperature and check noise and vibration.

T-2 Model No.	5-8	10-15	20-30	40-50	60-80	100-125	150-200	225-350	400-500	600-700	800-1000
LSF Model No.	-050-	-070-	-080-	-100-	-120-	-150-	-180-	-240-	-300-	-340-	-360-

With proper maintenance, the V-belt drive will operate reliably; however, proper maintenance is essential and the following instructions are very important.

6.1 Belt Adjustment

Before operation, open the adjustment access cover and check whether the washer on the adjusting bolt is aligned with the adjusting gauge. (Ref. Fig. A) Tighten the adjusting nut if necessary.

During operation, the belt may stretch, allowing belt slip and abrasion. Hence, the belt tension should be checked according to the following:

- (A) 50 hours after commissioning.
- (B) Thereafter, carry out 3 checks, each at 100 hour intervals.
- (C) After the 4th check, at 350 hours, then check each month.

Off-Season Shut Down – For a long-time shut down, slacken the adjusting nut 4-5mm to prevent bolt stretch. Re-adjust belts prior to putting the cooling tower back into service.

Adjustment Precaution – If a gap exists between the adjusting gauge and the washer, the belts are too slack. If the washer and the adjusting nut overlap the adjusting gauge, the belts are too tight.

6.3 Maintenance

The following work should be performed.

(A) Drive Section

Clean out the inside of the driving section annually.

(B) Motor Insulation

Before putting the tower into service in each cooling season, check the motor insulation with a 500 Volt Megger. A resistance greater than 1MΩ is acceptable.

(C) Bearings

Although it is unnecessary to lubricate the sealed bearings, an annual change of grease will extend their life. To repack the bearings, remove the seal plates with a sharp tool inserted as indicated by the arrow in Fig. B. Replace the seal plates after replacing the bearings.



