



SERVICE DEPARTMENT

ELECTRO-MOTIVE DIVISION • GENERAL MOTORS CORPORATION

# MAINTENANCE INSTRUCTION

## COOLING FAN V-BELT TENSION SW1000, SW1001, SW1500

### INTRODUCTION

The radiator cooling fan is driven by the engine through a set of V-belts – five on the SW1000 and SW1001 and seven on the SW1500. Proper belt tension is very important to efficient cooling system operation and long belt life.

### BELT APPLICATION

When applying a new or used set of matched V-belts, the center distance between the upper sheave and the idler sheave, Fig. 1, must be reduced sufficiently by loosening the four bolts holding the idler bracket to the idler support, thereby removing the tension applied to the belts by the idler sheave. This will permit the V-belts to pass freely over the pulleys. Any attempt to force the V-belts over the pulleys into the grooves without removing the tension can result

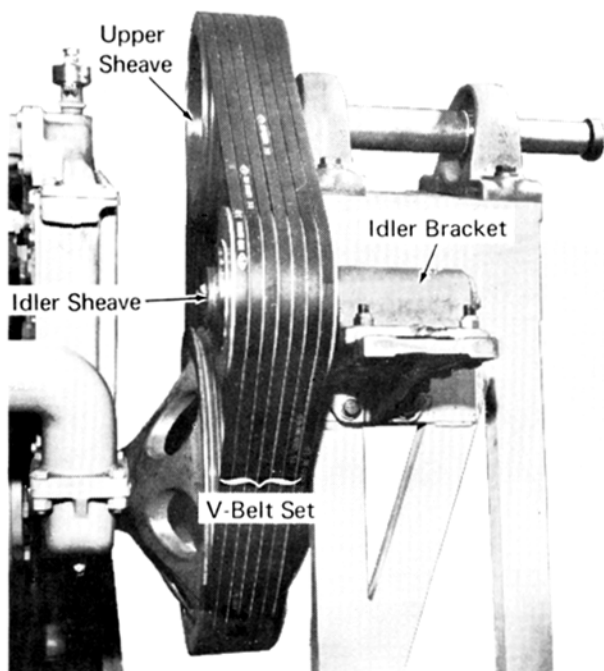
in ply breakage and belt cover damage thus decreasing belt service life. After the belt set is installed, the idler sheave should be re-tightened so that there is no more than 1/2" belt deflection at the center of the span and the drive should then be run for about one hour. This allows the belts to become well seated in the pulley grooves and equalized on both sides of the drive before actually checking the tension. The belt tension should be adjusted using a belt tension tester 8396234, Figs. 2 and 3. Adjust each belt to a force of 10 lbs. minimum to 15 lbs. maximum at 1/4" belt deflection with the tension tester located at the center of the belt span between the upper sheave and the idler.



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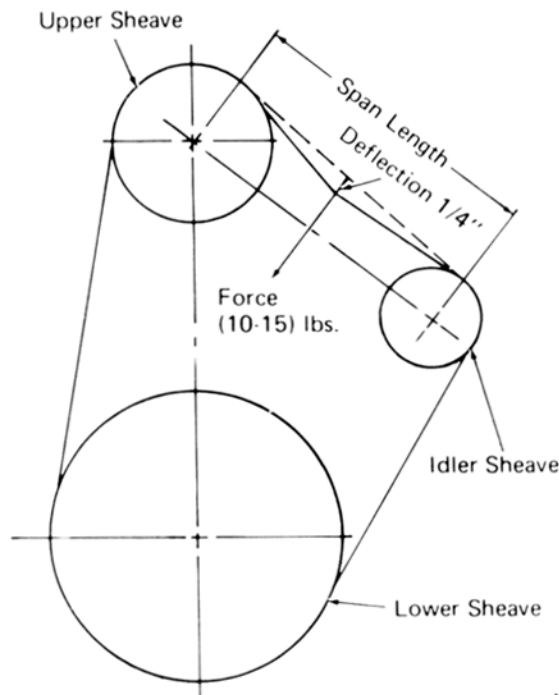
Fig. 2 – Belt Tension Tester

If too much tension is applied, the fan drive bearings may be damaged. If the belts are operated too loosely, they will slip and overheat.



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Fig. 1 – Cooling Fan V-Belt Drive



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Fig. 3 – Checking Belt Tension

Either of these conditions will cause V-belt and pulley life to be seriously shortened. If one or more of the belts cannot be adjusted to the proper tension limits, the belts may be either too large or too small. Mismatched belts will not equalize the load on the belts. This will result in the shorter belts carrying most of the load and the longer belts only riding. A mismatch may result in the complete failure of a set.

A code number is stenciled on the surface of each belt. All belts in a set *MUST* bear the same code number.

## MAINTENANCE AND STORAGE

When new belts have been installed, the tension should be rechecked after twenty-four hours of operation, at the end of one week of service, one month, and every six months thereafter. Belts should be stored in a location where they will not come in contact with excessive heat, dampness, or ozone. These elements have a deteriorating effect on rubber and cotton. If stocked in coils, they should not be coiled too tightly or stacked over 24" high. The recommended practice is to hang the belts over broad or double wall pegs that will not permit them to bend sharply.

## SERVICE DATA

Belt Tension Tester . . . . .	8396624
Belt Tension At 1/4" Deflection . . . . .	10 lbs. min.
	15 lbs. max.