

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL AND DIRECT SUPPORT

MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

TRUCK, FIRE FIGHTING, 4X4

MODEL 1350 PKP/200 AFFF

NSN 4210-00-484-5729

ANSUL FIRE PROTECTION

HEADQUARTERS, DEPARTMENT OF THE ARMY

29 DECEMBER 1986

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommend Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MCTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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If the Fire Fighting Truck needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you do not like about your equipment. Let us know why you do not like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: U.S. Army Troop Support Command, ATTN: AMSTR-QX, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. We will send you a reply.



CTS-2311 SERVICE MANUAL
S-SERIES
1978-1979-1980

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ROCKFORD FAN DRIVE CLUTCH

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CHAPTER I
ROCKFORD FAN DRIVE CLUTCH

GENERAL DESCRIPTION AND OPERATION

GENERAL DESCRIPTION

The Rockford Fan Drive Clutch is a compact, spring-loaded, oil cooled, multiplate clutch designed for continuous infinite fan-to-engine pulley speed ratios assuring prescribed engine coolant temperatures and minimum engine horsepower losses.

Engine cooling temperature demands are automatically transmitted through a sensor (the Thermal Air Valve) to the clutch. The Rockford Fan Drive smoothly and automatically adjusts the fan to the precise speed necessary to maintain specified coolant temperature.

Fan speeds are increased or decreased smooth without the usual shock loads. Oil cooled plat permit continuous

clutch slip to give variable fan speeds without clutch plate wear.

NOMENCLATURE

Rockford's Fan Drive Clutch Bracket is attached to the engine. The Bracket has as an integral part, the Fan Shaft (See Figure #1). The Shaft and Bracket Assembly acts as a bearing surface for the moving parts and as a distributor for actuating air pressure and the lubricating/cooling oil flow.

The Input Drive of the clutch is thru the Pulley and Bearing Retainer bolted together forming the Pulley Cavity. The Pulley Cavity is sealed at the shaft by rotating seals and is supported by heavy duty tapered roller bearings.



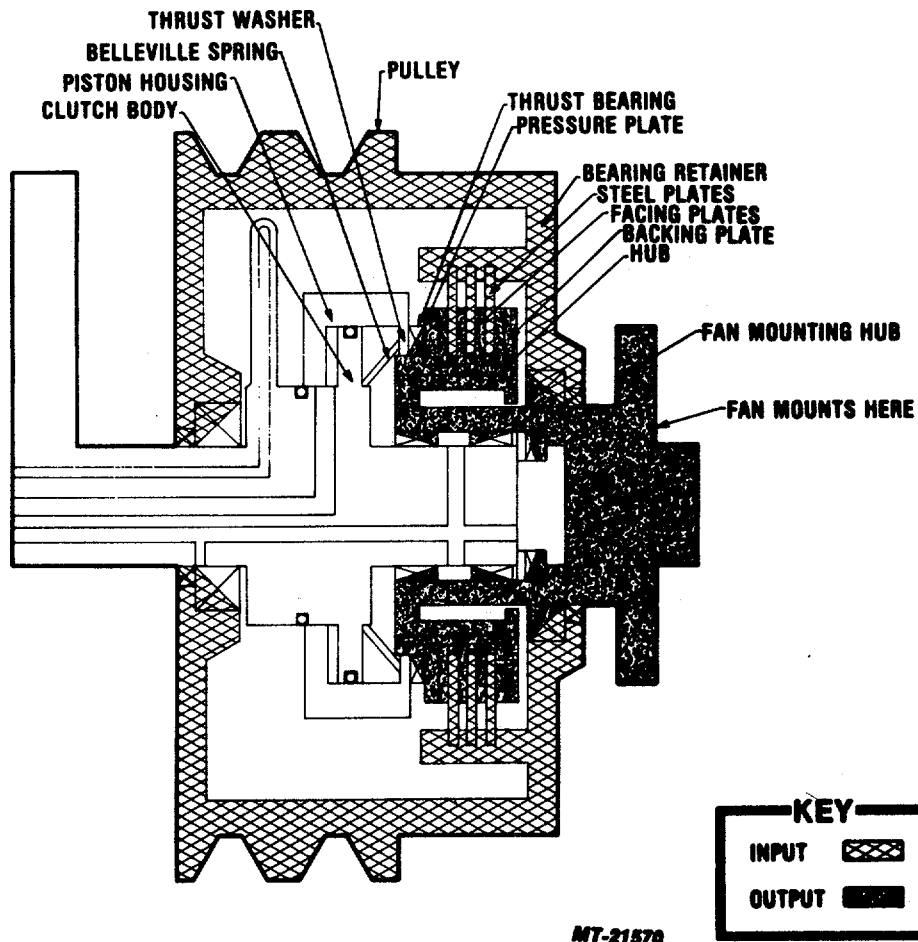
FIGURE 1

Belleville Springs (or solid Spacer Shims) in the Fan Mounting Hub preload the tapered bearings. The slotted cup section of the Bearing Retainer drives the externally tanged steel Clutch Plates.

The Output Drive of the Clutch is thru the Clutch Facing Plates which are splined to and drive the Hub. The inside diameter of the Hub is splined to and drives the Fan Mounting Hub. The fan blade is bolted directly or thru spacers to the Fan Mounting Hub.

Clutch Shims are placed on the Fan Mounting. Hub between the Hub and External Snapping to position the assembly for utilization of the optimum working range of the Belleville Spring.

The stationary Clutch Body is mounted inside the Pulley Cavity on the Fan Shaft. The Clutch Body acts as a distributor for air and oil, as an anchor for Pitot Tubes, and as a reaction member for the Belleville Spring. The Piston Housing is mounted on the outer diameter of the Clutch Body and is connected to the Belleville Spring thru the Thrust Washer. An air cavity is formed between the Piston Housing and Clutch Body.



MT-21570

POWER FLOW — FULL ENGAGEMENT

FIGURE 2