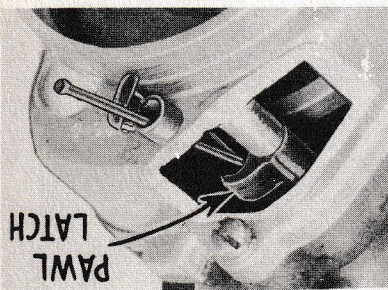
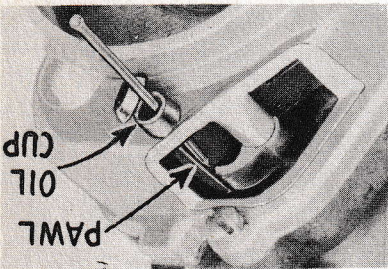


Release F-Type Impulse Coupling for Timing Without Timing Hook



ILLUST. 41--SHOWS HOW MAIN PAWL CAN BE LIFTED, DISENGAGING THE IMPULSE COUPLING FOR FREE ROTATION DURING TIMING.

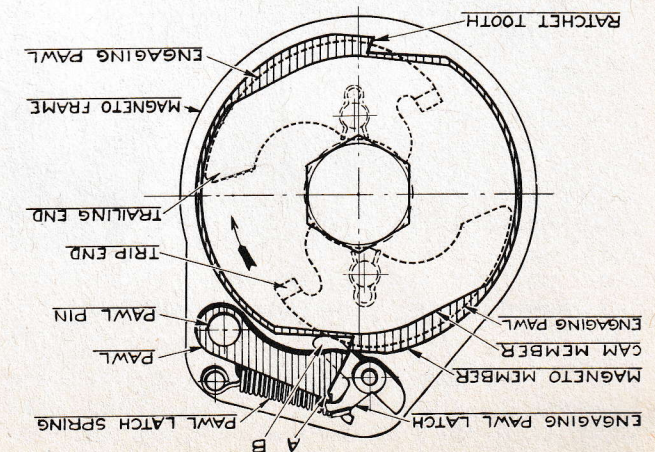


ILLUST. 42--SHOWS HOW LATCH IS TRIPPED, ALLOWING PAWL TO DROP IN OPERATING POSITION.

The timing hook has been removed from the later magnetos and the oil cup position has been changed in the impulse housing to a point where it can be used for a double purpose. First, to furnish an opening for lubricating the impulse coupling and, second, to furnish an opening through which the main pawl may be lifted to allow rotation of the magneto without the impulse action during the timing operation. By manipulating a light finishing nail through the oil cup as shown in Illust. 41 and 42, the pawl may be lifted for free rotation during timing.

By placing the nail in the position shown in Illust. 41 and prying downward on the outer end, the pawl may be lifted and the latch will hold it up. It may be necessary to turn the rotor (or rotate the magneto) to a point just past the trip of the impulse to accomplish the lifting of the pawl. If the impulse in the low position and the impulse spring is partly wound up, it will be impossible to move it with the nail.

To return the pawl to the operating position, place the nail in the position as shown in Illust. 42 and press down on the outer end of the nail to lift the latch.



ILLUST. 40--END VIEW DRAWING OF F-4 TYPE IMPULSE COUPLING.

The impulse coupling on the F-4 magneto is designed to automatically throw out at 180 to 280 R.P.M., the F-6 at 130 to 200 R.P.M., and the F-4 Diesel at 60 to 130 R.P.M. As the speed of the impulse coupling increases, the cam member disengages the pawl from the ratchet teeth with greater force. When the throw-out speed is reached the pawl is thrown high enough to catch latch tip under pawl ledge "A", Illust. 40. In this position pawl is supported out of engagement and the coupling rotates as a single unit, turning the magneto rotor at a steady speed with the engine. When the impulse speed is reduced to between 125 to 145 R.P.M. on the F-4 and F-6 magnetos, and between 75 to 90 R.P.M. on the F-4 Diesel magneto, the coupling automatically comes into operation again. As the throw-in speed is reached, the trailing ends of the engaging pawls which are the heavier, drop down on the magneto member hub when passing over the center of rotation. By so doing the trip ends raise to a position where they will strike lower arm of engaging pawl latch "B", Illust. 40, releasing latch from pawl. Pawl then drops into working position and impulse coupling is again in operation.

Release F-Type Impulse Coupling for Timing Without Timing Hook

A timing hook has been provided on the earlier types of F-type impulse coupling to free the coupling for timing. By lifting the timing hook, the pawl lifts out of engagement and a pawl latch holds it in that position. Magneto can then be turned freely for timing. To engage the impulse coupling, push the timing hook in and turn the impulse coupling until pawl drops.