

WIRING DIAGRAM FOR ROTARY VALVE AND TANK MOUNT INSTALLATION

CONVERTING SIDE POIT ENGINE TO ROTARY VALVE

O & R TWO-SPEED TIMER, WITH JIM WALKER'S U-REELY CONTROL HANDLE, ALLOWS CHANGE OF SPEED IN FLIGHT

O & R Two-Speed Timer

The accompanying diagram and instructions, provided by Jim Walker, explain the installation of the O & R Two-Speed Timer in connection with the U-Reely Control.

The high-speed point makes contact at all times, and slow speed is obtained by delaying the timing time through the slow-speed point. Notice in the drawing that the slow-speed point is normally connected to the high-speed point, and high speed is obtained by engaging the relay, which in turn disconnects the slow-speed point.

The signal leads from the bell crank to the relay should be of rubber-insulated wire or similar type. Since R-Ring wires average one ohm per foot, the relay should be 1000 ohms or more. Here is a table of relays and voltage requirements:

- (1) Leaky Relay: 1,200 ohms, 215 or 30 volts.
- (2) Five Relay (shown in diagram): 1,200 ohms.
- (3) Signal and other type sensitive relay: 5,000 ohms, 225 to 0 volts; 2,000 ohms, 45 to 57.5 volts.

Note that 45-volt boosters are specified. You will find that most of your ignition trouble disappears if you use 45-volt battery boosters, and that the life of your field battery will be increased five to eight times.

The batteries are mounted in two Austin gun cell type boxes, with one end of each removed and fastened in 3/4" plywood.

OHLSSON & RICE, INC.
Emery at Grande Vista, Los Angeles 23, Calif.

GENERAL INSTRUCTIONS

OHLSSON & RICE ENGINE is the product of the world's largest manufacturer of miniature engines and is designed especially for use in model building. It is not intended for use in any other type of engine. Every part of the engine has been inspected and tested, and a Warranty Card is included with each engine.

It is of the utmost importance that you fill out your Warranty Card and return it to the factory for registration. KEEP A RECORD of your model number, so that in the event your engine is lost or stolen, we can assist you in proving your ownership.

To insure the best performance and efficiency from your Ohlsson & Rice Engine it is imperative to study carefully the instructions in this folder and be sure they are thoroughly understood before operating the engine.

An inspection feature of Ohlsson & Rice Engines is their complete construction. Cylinders are secured to the crankcase, using special fastener equipment, and can only be removed and replaced at the factory or authorized factory service station. Do not attempt to remove the cylinder from the crankcase, as it will damage the engine.

In the side port engine, the intake valve is also an integral part of the crankcase and cannot be removed.

FIGURE 1—Checking the Spark

FIGURE 2—Timing the Engine

FIGURE 3—Clean Oil

FIGURE 4—Cleaning Ignition

FIGURE 5—Timing the Engine

FIGURE 6—Timing the Engine

FIGURE 7—Timing the Engine

FIGURE 8—Timing the Engine

FIGURE 9—Timing the Engine

FIGURE 10—Timing the Engine

FIGURE 11—Timing the Engine

FIGURE 12—Timing the Engine

FIGURE 13—Timing the Engine

FIGURE 14—Timing the Engine

FIGURE 15—Timing the Engine

FIGURE 16—Timing the Engine

FIGURE 17—Timing the Engine

FIGURE 18—Timing the Engine

FIGURE 19—Timing the Engine

FIGURE 20—Timing the Engine

INSTRUCTIONS FOR ROTARY VALVE AND TANK MOUNT INSTALLATION

For installing rotary valve engine, see section on ROTARY VALVE ENGINE in this manual.

CLEANING THE ENGINE

It is seldom necessary to disassemble your engine. However, if you have flown in under dry field conditions, the engine should be thoroughly cleaned. Remove the spark plug, fully remove the intake control arm and pull the intake valve down away from the crankcase. When the intake arm is in this position, the timing control point is disengaged from the arm, allowing the crankcase down section to be removed without injury to the timing mechanism (Fig. 8). Turn the connecting rod so that the bearing is cross-wise to the crankcase and "pop" the piston and end of the cylinder (Fig. 9). Wash all parts thoroughly in clean gasoline and wipe dry with a clean rag. Before the bearing surface and the piston, be sure that you are removing the piston deflector is on the side of the cylinder opposite the exhaust port. The engine will not operate if assembled in any other manner (Fig. 10).

INVERTING

Side port engine can be operated satisfactorily either upright or inverted simply by using an inverted fuel tank (Fig. 7).

FIGURE 11—Timing the Engine

FIGURE 12—Timing the Engine

FIGURE 13—Timing the Engine

FIGURE 14—Timing the Engine

FIGURE 15—Timing the Engine

MANUAL OF OPERATION & MAINTENANCE

FIGURE 16—Timing the Engine

FIGURE 17—Timing the Engine

FIGURE 18—Timing the Engine

FIGURE 19—Timing the Engine

FIGURE 20—Timing the Engine

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FIGURE 21—Timing the Engine

FIGURE 22—Timing the Engine

FIGURE 23—Timing the Engine

FIGURE 24—Timing the Engine

FIGURE 25—Timing the Engine

OHLSSON

the Engine Used by EXPERT MODEL BUILDERS and those who want to be!

THERE'S ALWAYS ONE LEADER

Ohlsson Miniatures

630 NORTH ALVARADO ST. LOS ANGELES, CALIF.

STANDARD IGNITION HOOK-UPS

FIGURE 26—Timing the Engine

FIGURE 27—Timing the Engine

FIGURE 28—Timing the Engine

FIGURE 29—Timing the Engine

FIGURE 30—Timing the Engine

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FIGURE 31—Timing the Engine

FIGURE 32—Timing the Engine

FIGURE 33—Timing the Engine

FIGURE 34—Timing the Engine

FIGURE 35—Timing the Engine