

## AIR VEHICLE HARDWARE DESCRIPTION

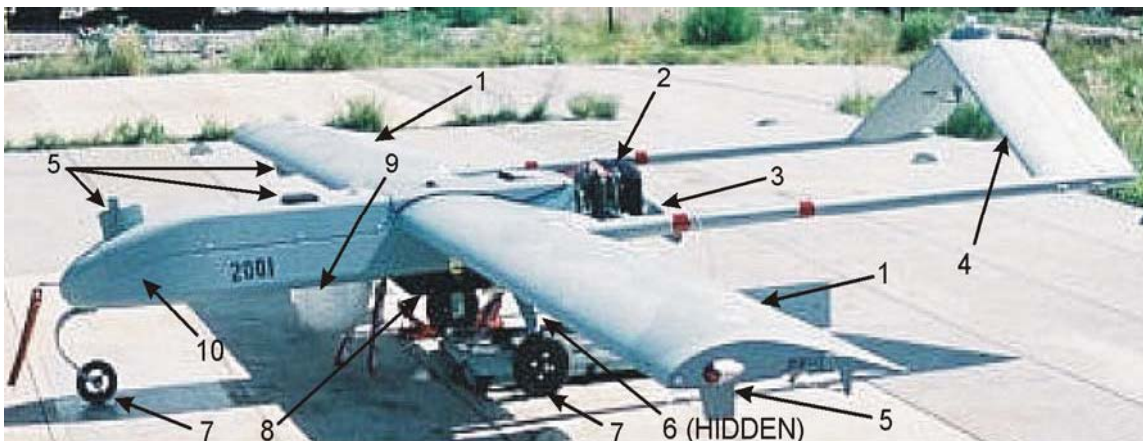


Figure 1. Shadow 200 TUAV, major hardware components.

Refer to Figure 1. The Shadow 200 TUAV System AV has ten major hardware components: wing assembly (Figure 1, item 1), engine (Figure 1, item 2), propeller (Figure 1, item 3), empennage assembly (Figure 1, item 4), antenna system (Figure 1, item 5), arresting hook (Figure 1, item 6), landing gear system (Figure 1, item 7), Flight Termination System (FTS) (Figure 1, item 8), EO/IR payload (Figure 1, item 9) and fuselage (Figure 1, item 10).

## AIR VEHICLE DIMENSIONS AND WEIGHTS

### WEIGHT AND DIMENSIONS (Assembled):

Length.....	11 feet 4 inches
Width.....	14 feet 0 inches
Height .....	3 feet 2 inches
Empty .....	252 to 257 pounds
Fuel .....	73 pounds (44 liters)
Oil .....	5 pounds (2.5 liters)
Fully fueled (without payload) .....	330 to 335 pounds

### WEIGHT AND DIMENSIONS (Assembled) Continued:

#### POP 200

Payload weight (including mounting plate).....	34.5 pounds w/plate (no hardware)
Take off weight with payload and maximum fuel .....	370 to 375 pounds (44 liters)

#### POP 300

Payload weight (including mounting plate).....	35.25 pounds w/plate (no hardware)
Take off weight with payload and maximum fuel .....	370 to 375 pounds (44 liters)

The engine is a single rotor, ram air-cooled Wankel-type pusher engine (Figure 2, item 1). A diaphragmtype carburetor (Figure 2, item 3) supplies fuel to the engine and a fuel pressure regulator maintains 4.5 PSI to the carburetor throughout the throttle range. An Altitude Compensation Device (ACD) reduces fuel flow for the fuel/air mixture at high altitudes. An electrical heated throttle plate minimizes carburetor icing. The carburetor is equipped with high and low speed adjustments, which allows fuel/air mixture adjustments on the ground. A simple, non-silenced exhaust gas stub pipe (Figure 2, item 2) directs exhaust gases away from the vehicle.

Recommended fuel is Aviation Gasoline (AVGAS) 100LL for the AR74-1100 engine. In the event this fuel is not available, Motor Gasoline (MOGAS) with a minimum 87 octane and no ethanol additives may be used as an alternate.

Required fuel for the AR74-1101 engine is AVGAS.