

check the compass heading and make minor corrections to hold an approximate course. Before descending into the clouds, set up a stabilized let-down condition as follows:

- (1) Apply full rich mixture.
- (2) Use full carburetor heat.
- (3) Reduce power to set up a 500 to 800 ft./min. rate of descent.
- (4) Adjust the elevator trim tab for a stabilized descent at 90 MPH.
- (5) Keep hands off the control wheel.
- (6) Monitor turn coordinator and make corrections by rudder alone.
- (7) Check trend of compass card movement and make cautious corrections with rudder to stop the turn.
- (8) Upon breaking out of clouds resume normal cruising flight.

RECOVERY FROM A SPIRAL DIVE.

If a spiral is encountered, proceed as follows:

- (1) Close the throttle.
- (2) Stop the turn by using coordinated aileron and rudder control to align the symbolic airplane in the turn coordinator with the horizon reference line.
- (3) Cautiously apply elevator back pressure to slowly reduce the indicated airspeed to 90 MPH.
- (4) Adjust the elevator trim control to maintain a 90 MPH glide.
- (5) Keep hands off the control wheel, using rudder control to hold a straight heading.
- (6) Apply carburetor heat.
- (7) Clear engine occasionally, but avoid using enough power to disturb the trimmed glide.
- (8) Upon breaking out of clouds, apply normal cruising power and resume flight.

FIRES.

ENGINE FIRE DURING START ON GROUND.

Improper starting procedures such as pumping the throttle during a difficult cold weather start can cause a backfire which could ignite fuel that has accumulated in the intake duct. In this event, proceed as follows:

- (1) Continue cranking in an attempt to get a start which would suck

the flames and accumulated fuel through the carburetor and into the engine.

- (2) If the start is successful, run the engine at 1700 RPM for a few minutes before shutting it down to inspect the damage.
- (3) If engine start is unsuccessful, continue cranking for two or three minutes with throttle full open while ground attendants obtain fire extinguishers.
- (4) When ready to extinguish fire, release the starter switch and turn off master switch, ignition switch, and fuel selector valve handle.
- (5) Smother flames with fire extinguisher, seat cushion, wool blanket, or loose dirt. If practical try to remove carburetor air filter if it is ablaze.
- (6) Make a thorough inspection of fire damage, and repair or replace damaged components before conducting another flight.

ENGINE FIRE IN FLIGHT.

Although engine fires are extremely rare in flight, the following steps should be taken if one is encountered:

- (1) Pull mixture control to idle cut-off.
- (2) Turn off fuel selector valve handle.
- (3) Turn off master switch.
- (4) Establish a 120 MPH glide.
- (5) Close cabin heat control.
- (6) Select a field suitable for a forced landing.
- (7) If fire is not extinguished, increase glide speed in an attempt to find an airspeed that will provide an incombustible mixture.
- (8) Execute a forced landing as described in paragraph Emergency Landing Without Engine Power. Do not attempt to restart the engine.

ELECTRICAL FIRE IN FLIGHT.

The initial indication of an electrical fire is the odor of burning insulation. The immediate response should be to turn off the master switch. Then close off ventilating air as much as practicable to reduce the chance of a sustained fire.

If electrical power is indispensable for the flight, an attempt may be made to identify and cut off the defective circuit as follows:

- (1) Master Switch -- OFF.