

TECHNICAL BULLETIN – Ignition Timing (LPG / Petrol Engines) 16.10.20

The ignition timing of your engine should be set or checked when the winch was built and when serviced.

There are two types of distributor commonly in use (small / large).

Launching with the timing too advanced can cause detonation resulting in serious damage to the engine. Having the timing too advanced can also put the starter motor under undue stress when starting. Launching with the timing too retarded can cause power loss or backfiring.

For these reasons, it is essential that the timing is correct to give maximum power without other problems. Should you ever lose the original timing setting, this procedure has been developed to allow you to reset it.

The timing is changed by loosening the clamp plate on the distributor then rotating it. Rotate the distributor anticlockwise to advance the timing and rotate the distributor clockwise to retard the timing. The clamp plate must be tightened again before launching.

Small Distributor

This distributor has a separate coil and does not have mechanical advance springs and weights. This type is no longer fitted new unless requested as the large distributor has been found to offer better reliability.

To set the small distributor:

1. Connect timing light to battery and HT lead number 1 (lead to plug closest to harmonic balancer). Remove fan cowling if necessary, to see the marks on the harmonic balancer.
Check that none of the leads are touching any hot or moving parts
2. Start the engine and allow it to idle. Shine the timing light on the marks.
3. If necessary, loosen the distributor clamp plate bolt and rotate the distributor until: (27° LPG / 25° Petrol) BTDC is shown at the marker. Tighten the bolt after adjusting.
4. Check the idle speed and adjust as necessary using the adjustment screw below the carburettor.
5. Switch off the engine and refit the fan cowling if removed. Disconnect the timing light.



Large Distributor

This distributor has its own coil built in and does not have mechanical advance springs and weights. This allows the timing to vary with engine speed. This type has been found to be more reliable than the small distributor.

The large distributor comes with a vacuum advance canister, seen towards the bottom right of the photo. This should be left disconnected at all times.



To set the timing for the large distributor:

1. Connect timing light to battery and HT lead number 1 (lead to plug closest to harmonic balancer). Remove fan cowling if necessary, to see the marks on the harmonic balancer.
Check that none of the leads are touching any hot or moving parts
2. Check that the vacuum advance canister is disconnected.
3. Start the engine and allow to idle until warm (above 60°C).
4. When the engine is warm, increase engine speed to 3000 rpm. Shine the timing light on the marks.
5. If necessary, loosen the distributor clamp plate bolt and rotate the distributor until: (32° LPG / 30° Petrol) BTDC is shown at the marker. Tighten the bolt after adjusting.
6. Allow the engine to idle for a minute, then check the idle speed and adjust as necessary using the adjustment screw below the carburettor.
7. Whilst allowing the engine to idle, check that 6° - 20° BTDC is shown at the marker. If not contact Skylaunch for advice.
8. Switch off the engine and refit the fan cowling if removed. Disconnect the timing light.