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We thought that we would change the format of the newsletter so that we can look in more detail at different aspects of our business and to give an insight into the work that goes into providing a product that pleases the customer.

## **A detailed look at Tractor Unit installations**

This month we will be looking at all aspects of this very important part of our business and in which we have been very active for many years. Thanks to our close co-operation with GHH, we have available an extensive range of **direct drive 2.5 bar compressors** specifically designed to fit into 3 axle tractors to Euro 6 specification. This gives us an enormous advantage over other makes of compressors installation because neither belts nor hydraulics are required. The following procedures are always followed:

**1)** Establish the exact specification of the tractor unit to be supplied before the tractor is ordered . The information that we need will be: Make of truck, wheelbase, gearbox type and 1st gear ratio, auxiliary components and their position on the chassis, confirmation that the truck is PTO compatible. We also will need to know the product to be carried and the type of deliveries to be made.

If a tipping tanker is involved we need to know the location of the hydraulic oil tank, if there is to be a split fuel/oil tank and details of the hydraulic pipes.

**2)** With this information we can then not only specify the appropriate compressor but, most importantly, the correct PTO with the correct speeds, power ,torque and configuration to give the correct compressor speed. This can then be factory fitted saving 50% on retro-fitting, also covered by factory warranty.

This is a critical stage of the specification process, since once the operating speed has been established, this information is passed to the truck supplier, so that the Engine Management System can be programmed and so that the Power Take Off and compressor operates at the correct speed relative to the engine speed. We can also offer a two speed system that can decrease product discharge time by 20%.

This part of the operation requires close collaboration with the chassis supplier to ensure that every component is specified, down to the last detail. These details now include solenoid, wiring diagrams, pipes and switches.

**3)** At this point it is worth noting that when a vehicle is returned to the dealer for any service or repair work to be done, it is essential to check that the Engine Management System has not been altered for any reason. We have found that this problem is often the reason for lack of performance from the compressor, due to its operating speed being altered by the EMS

**4)** Because the GHH range of compressors has been designed for UK truck application, it does mean that we are able to achieve drive shaft angles which are below the angles specified by the manufacturer and this is typically 3 degrees, whereas with a conventional compressor, the compound angle might be in excess of 12 degrees. This, of course would mean very short prop shaft life.

Another benefit of the compressor design is that we can always ensure that the drive flanges are in parallel with one another. Failure to achieve this will soon result in bearing failure in the drive shafts

We are please to be able to say that we have always been able to achieve the required drive shaft angle on every installation that we have undertaken.

Although the design of the compressor makes any installation possible, it does not necessarily make it easy, but with the hundreds of GHH

installations that we have undertaken, we do believe that we have satisfactorily overcome any problem that we have encountered.

#### **5) Design Details:**

Over the years, deficiencies in the design of component parts have become evident and where this occurs we always try to identify another source of supply to overcome the problem. For that reason we now supply full flow pressure relief as well as full flow non return valves to minimise the back pressure in the system. For the same reason we have put a lot of thought into the pipework layout to minimise the number of bends to be used. The build up of back pressure in the pipework must be avoided since back pressure, as well as noise, causes heat which causes premature wear in rubber pipes. Additionally, pressure lost through the pipework is pressure that should be used to discharge the product.

Because the compressor design allows us more available space in the chassis, we are able to ensure that the inlet filter is positioned so that it is protected from the road spray, which can have serious consequences from the rust which will form inside the compressor. In the same way, protection from exhaust fumes through the inlet filter must be taken into account.

On the question of compressor servicing, we would like to make the following points:

**A) Make sure that when greasing the prop shaft, the grease comes out of every bearing.**

**B) Make sure that the filter is free from restriction and also that the vacuum gauge is operating fully.**

**C) Make sure compressor oil level is correct.**

We hope that you found this information of interest.

**For more information contact:**

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# Windows vs Ford

At a recent computer expo (COMDEX), Bill Gates reportedly compared the computer industry with the auto industry and stated, "If Ford had kept up with technology like the computer industry has, we would all be driving \$25 cars that got 1,000 miles to the gallon."

In response to Bill's comments, Ford issued a press release stating: If Ford had developed technology like Microsoft, we would all be driving cars with the following characteristics (and I just love this part):

1. For no reason whatsoever, your car would crash... twice a day.
2. Every time they repainted the lines in the road, you would have to buy a new car.
3. Occasionally your car would die on the freeway for no reason. You would have to pull to the side of the road, close all of the windows, shut off the car, restart it, and reopen the windows before you could continue. For some reason you would simply accept this.
4. Occasionally, executing a maneuver such as a left turn would cause your car to shut down and refuse to restart, in which case you would have to reinstall the engine.
5. Macintosh would make a car that was powered by the sun, was reliable, five times as fast and twice as easy to drive - but would run on only five percent of the roads.
6. The oil, water temperature, and alternator warning lights would all be replaced by a single "This Car Has Performed An Illegal Operation" warning light.
7. The airbag system would ask, "Are you sure?" before deploying.
8. Occasionally, for no reason whatsoever, your car would lock you out and refuse to let you in until you simultaneously lifted the door handle, turned the key and grabbed hold of the radio antenna.
9. Every time a new car was introduced car buyers would have to learn how to drive all over again because none of the controls would operate in the same manner as the old car.
10. You'd have to press the "Start" button to turn the engine off.

**PS - We'd like to add that when all else fails, you could call 'customer service' in some foreign country and be instructed in some foreign language how to fix your car yourself!**