

INTRODUCTION

The Buda-Lanova Diesel Engines represent the latest development in Diesel engines for industrial, marine and portable services. They are manufactured under a license from the Lanova corporation. The Lanova Combustion is a development of Franz Lang who in the early days of the Diesel engine was associated with Dr. Rudolph Diesel and who subsequently developed the Arco Combustion System and the Fuel pumps and nozzles now manufactured by the American Bosch Company.

The Buda Company offers its customers not only the benefit of its own efficient organization but through its association with Lanova, gives the benefit of the Lanova organization. This association commands the consulting services for any new developments or problems and assures the Buda Company of obtaining the valuable knowledge of probably the best known and most experienced Diesel engineers.

The Buda-Lanova Diesel engine requires practically the same space as a gasoline engine of the same horse power and because of its inherent design offers the lowest specific weight at the same speed of any Diesel engine combined with low fuel and maintenance costs, quiet operation and a clean exhaust. The very low maximum pressure encountered in this type of engine is the principle reason for its low specific weight and the ease of operation and servicing.

The Buda-Lanova Diesel engine is a tried and proven product, one that is backed by an organization that has been in the manufacturing business since 1881—an organization of indisputable moral and financial responsibility.

IMPORTANT

Our engines are known to us by their serial numbers. This number is found on the nameplate which is fastened to the side of the engine. All requests for information or orders for parts must contain this number for prompt and efficient response.

Instructions and information in this manual, derived from practical field experience, should be strictly adhered to if satisfaction is to be obtained.

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INSTALLATION

INSPECTION OF SHIPMENTS

Every Buda engine is very carefully crated for rough handling during shipment, but a close inspection should be made for damage before accepting it from the transportation company. Shortages should also be checked with the packing list and reported at once to the transportation agent. In case of shortage, make claim before accepting shipment.

ENGINE BED

Whether the engine is of the base or oil pan type, the supporting structure must be one that is absolutely rigid. There must be no weaving or slipping that could be transmitted to the engine proper.

LIFTING THE ENGINE

The cylinder heads are fitted with several long studs which project far enough to permit the attachment of lifting eyes for lifting the engine and these should be used for the purpose intended. The studs are accessible by removing the cylinder head covers.

ALIGNMENT

The correct alignment of the engine and driven member is very important. Mis-alignment gives rise to trouble and should be checked periodically with special reference to engine hold down bolts. These must be kept tight at all times.

MAIN FUEL TANK

The engine is equipped with a fuel transfer pump which sucks fuel from the main fuel tank and delivers it through filters to the fuel injection pump.

The main fuel tank may be located without regard to gravity flow, however, the lift from the tank to the transfer pump must not exceed six and one-half feet and the length of suction line must be a minimum. The suction line should not be dropped closer than two inches from the bottom of the main fuel tank on account of sediment. Provide a sediment bulb or drain at the very bottom of the tank to permit draining off this sediment.

A shut-off valve and a suitable check valve should be located in the suction line and near the main fuel tank. The shut-off valve will permit dismantling or breakage of fuel lines without previous draining or loss of fuel supply. The check valve will prevent the fuel injection system from draining when the engine is stopped and causing air locks. Care should be taken to avoid leaks in all fuel lines. Air leaks or air pockets in the lines will cause inefficient operation and hard starting.

CONTROLS

All controls, connections and wiring should be as short as possible. When installing controls, do not change the position of the levers on the engine. Ample travel should be allowed for control levers without lost motion.

WATER PIPING

On these engines which require cooling water from a source other than a radiator, considerable piping may be necessary. This piping should be of ample size. Avoid restrictions to free flow of cooling water. It is desirable to use a short section of wire-reinforced rubber or steam hose some place in the water intake line to take up vibration. The suction of the water pump will collapse ordinary rubber hose if the suction is too long. Clean water will keep the engine water jackets free from sediment. A good water strainer will make the installation better.

EXHAUST PIPE

Normally a vertical exhaust stack is used and this must be erected so that there is no excessive weight carried by the exhaust manifold. It is also important that the exhaust pipe is not affected by swaying of the engine house, machine cab, etc., as breakage of the manifold will result.

With the water cooled manifold, a flange at the rear of the exhaust manifold serves as a connection for the exhaust manifold water inlet and also covers the end of the water jacket space in the manifold.

GENERAL INFORMATION

If possible install the power unit with reference to the prevailing wind so that a minimum amount of dust reaches the engine, particularly on dusty installations such as feed mills, rock crushers, etc.

Where the installation is indoors, there should be at least two openings, preferably at opposite ends, to provide cross ventilation.

If the intake and exhaust pipes are carried outside of the building, they must

be erected so that no excessive weight is carried by the engine manifold. Suitable covers should be provided to exclude rain or snow, however, there must be no restriction to the air flow or exhaust gases. Where the intake pipe is exposed to flying lint or chaff as in the case of cotton gin or feed mill installations, the intake opening should be protected with a detachable screen to prevent choking the air cleaner. The screen should be kept clean and large enough to prevent restriction of the air flow.