“HO” HYDRAULIC OVERLOAD limiter: THE NEW HYDRAULIC LIFTING MOMENT LIMITING DEVICE

The “HO” is an Hydraulic Lifting Moment Limiting Device (LMLD) specifically designed and tested by Fassi’s R&D Department to suit the light range of articulated cranes in accordance with the European safety standards EN12999.

Considering the simple sale configuration of the light range of cranes the “HO” has been made simple but performant and highly reliable in its operational functions, easy to install, to set and to maintain. The “HO” will be initially fitted, for CE countries, for the models F50A, F65A, F80A and, with the exclusion of the Micro range, is also applicable on all smaller cranes below the F50A.

Components building up the “HO”, as outlined on below picture, are:

A) Lifting Moment Limiting Device valve
B) Selector valve with oil pressure gauge connector to check the LMLD pressure setting
C) Pressure sensor hoses from the lift rams to the selector valve
D) Cylinders monobloc unit (integrated into the LMLD valve) to lock the distributor bank levers
E) Pressure gauge
F) Hydraulic emergency push-button

From a performance point of view, the pressure signal coming from the cylinder side of the lifting rams pilot the LMLD valve when an overload condition is reached. The effect determined by the piloting of the LMLD valve is the pressurization of the cylinders monobloc unit flanged to the segments of the distributor bank. In such condition the following functions are locked:

- Descent of the inner ram
- Lift and descent of the outer ram
- Exit of the extension rams

All other functions can be still operated.
Full crane functions reactivation is achieved by the retraction of the extension rams.

Whenever the overload condition takes place with extension rams fully re-entered, the activation of the distributor bank lever controlling the re-enter of the extension rams determines the exclusion of the “HO” device and authorize the operation of the outer boom descent (this function is comparable to the one of the exclusion LMI button of the electronic FX device).

CE control panel components, as outlined on picture, are:

E) Pressure gauge with coloured scale: green = load lower then 90%; yellow = load between 90 and 100%; red = above 100% of the nominal load.

F) Hydraulic emergency push-button.

The pressure gauges and emergency push-buttons are located on both ground crane control stations.

Though the “HO” has been made “simple – performant – reliable – easy to set and to maintain” it can be combined with electro-hydraulic control functions for rotation arc limitation and winch stroke end and torque limiter.

Alternatively a mechanic, permanent, 210° rotation arc limiter is also available.

For those customers that like advanced technology the “FX” Electronic Lifting Moment Limiting Device system (ELMLD) is still available and is a must when the crane is fitted with one of the following options:

- Lifting Moment Limiting Device for two working zones.
- Third stand up control station or top seat controls.
- Hydraulic jibs.
- S800 distributor bank and radio remote control.