BOMFORD

MEDIA INFORMATION

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Unique DMV valve cuts the heat

A unique design of valve that is being incorporated into the hydraulic systems on BOMFORD side-arm mowers not only helps to reduce oil temperature, but as a result saves on tractor fuel consumption and overall running costs.

Traditionally like many hydraulically powered machines, Bomford side-arm mowers utilised a freeflow hydraulic system. However, a drawback to this kind of system is the need for the hydraulic circuit to be maintained at maximum pressure required by the implement which places an increased load on the pump, seals and other components within the hydraulic system. In addition, as oil flows at high pressure through the relief valve in the system, so heat is generated.

To overcome this Bomford, in conjunction with one of its hydraulic component suppliers, has created the unique Direction Modular Valve (DMV), which is now being fitted to all Bomford machines equipped with ICS or EPP3 electronic control systems.

“We have developed the DMV valve because to use a true load-sensing system would be too bulky and be far more costly,” explains Bomford Senior Technician Mark Cresswell. “On a true load-sensing system the flow to each service exactly matches its requirement. The DMV valve works in a similar way, but raises and lowers the hydraulic pressure to the highest flow required at that moment in the system, so the valve block is far simpler and more compact.”

In operation, the hydrostat unit within the DMV valve continually monitors the flow and pressure demands of the hydraulic system, and will adjust the flow to meet the highest demands of the system. Less oil therefore passes through the relief valve at high pressure, with the result that the heat generated is considerably reduced.

Due to the hydraulic oil running at a lower temperature, this has the benefit that the overall load on the hydraulic pump is reduced and because the operating pressure is less, the load on the seals and other hydraulic components is lowered, resulting in reduced wear.

In addition, due to the hydraulic pump not constantly running to maintain a high working pressure, fuel consumption is reduced, engine power is released and because the hydraulic oil runs at a lower temperature, so less viscous, the hydraulic control is smoother.

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