HYDRAULIC PUMP DAMAGE

HOUSING CUT OUT

Pump housing cut-out in excess of .006" due to over pressurization.

CAUSES OF DAMAGE
- Pump over pressurization
- The pump is being operated beyond its pressure rating or subject to sudden or sustained over pressure

SOLUTION
- Review application and check against the pump specifications. Check relief valve setting and function. Replace pump or body section.

CRACKED HOUSING

Pump body cracked at pressure port due to over pressurization.

CAUSES OF DAMAGE
- Over pressurization
- The pump is being operated beyond its pressure rating or subject to sudden or sustained over pressure

SOLUTION
- Review application and check against the pump specifications. Check relief valve setting and function. Replace pump or body section. Check proper specification for fittings.

BURNED PUMP BODY

Discoloration of pump body in the gear housing or relief valve area due to excessive heat.

CAUSES OF DAMAGE
- Overheating of pump

SOLUTION
- Review application and check against the pump specifications. Check relief valve setting and function. Replace pump or body section. Check proper specification for fittings.

THRUST PLATE PHONOGRAPHING

Circular scoring on thrust plate face resembles the grooves on a record.

CAUSES OF DAMAGE
- Large particles (metal shavings, etc.) contamination.

SOLUTION
- Replace thrust plates and seals. Flush entire system and replace oil and filters.

THRUST PLATE JETTING

Diagonal “erosion” on face of thrust plate.

CAUSES OF DAMAGE
- Erosion particles (metallic debris) in high concentration

SOLUTION
- Replace thrust plates and seals. Flush entire system and replace oil and filters.

THRUST PLATE Pitting

Pitting of thrust plate surfaces, often in a “U” shaped pattern. May also occur on the pump body walls.

CAUSES OF DAMAGE
- Abrasive wear on the pump shaft makes sanding or debris which impacts on the outer side of the pump

SOLUTION
- Check suction strainer and replace filter. Review suction line for wear.

THRUST PLATE CRACKING

Cracks or complete fractures of the thrust plate.

CAUSES OF DAMAGE
- Overheating of pump

SOLUTION
- Replace thrust plates and seals. Flush entire system and replace oil and filters.

BURNT THRUST PLATE

Thrust plate face is blackened.

CAUSES OF DAMAGE
- Overheating of pump

SOLUTION
- Replace thrust plates and seals. Flush entire system and replace oil and filters.

BURNT SHAFT GEAR

Discoloration of gears due to excessive heat.

CAUSES OF DAMAGE
- Overheating of pump

SOLUTION
- Replace thrust plates and seals. Flush entire system and replace oil and filters.

SHAFT SPLINE FRETTERING

Worn shaft splines with brownish residue. The PTO shaft splines will show similar wear.

CAUSES OF DAMAGE
- Caused by a combination of lubrication and harmonic engine vibrations

SOLUTION
- Replace pump shaft. Apply lubrication at regular service intervals. Specify Muncie PTO with greaseable input shaft spline.

BROKEN/TWISTED SHAFT

Shaft is broken/twisted off at base of spline area.

CAUSES OF DAMAGE
- Excessive operating torque or severe shock load

SOLUTION
- Review application and check against the pump specifications. Replace pump shaft. Check operation and setting of system relief valve.

SHAFT KEYWAY DAMAGE

Edges of keyway damaged. Marks where set screw moved under load.

CAUSES OF DAMAGE
- Loose and/or race set screw. Damage to race or splines

SOLUTION
- Replace pump input shaft. Repair or replace shaft.