



Industrial  
Lubricants



Automotive  
Lubricants



Biodegradable  
Lubricants



Agricultural  
Lubricants



Cleaning &  
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Greases &  
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Foodsafe  
Lubricants



Heritage Oils



Lubrication  
Equipment



Metalworking  
Fluids



## Hydraulic Oils HM AF

Premium Quality Zinc Free, Ashless Hydraulic Oils  
Product Code: A7R, A7S, A7T, A7U

### Product Description

Pennine HM AF Hydraulic Oils are Zinc free fluids developed for use in most hydraulic power and control systems. Manufactured from heat stable high viscosity index solvent refined base oils, they incorporate Zinc free, ashless additives to improve the anti-wear performance, oxidation resistance, protection from corrosion, air release and anti-foaming tendencies. These oils when compared to conventional hydraulic oils have better hydrolytic stability, demulsability and filterability whilst maintaining good antiwear performance for pump and gear protection.

### Applications

Suitable for most hydraulic power systems where reciprocating or rotary fluid pumps are used, including reciprocating and axial piston units, rotary gear, and vane pumps. Their main applications are found in areas where water contamination is possible, in equipment containing silver plated components and in other applications where the use of a Zinc free oil is required however they are also suitable for use where conventional hydraulic oils are used.

### Performance Specifications

Pennine HM AF Hydraulic Oils meet the requirements of general industrial specifications such as DIN 51524 Part 2 (HLP), Sperry Vickers I-286-S and AFNOR NFE 48603 (HM).

### Typical Test Data

|                     | A7R  | A7S  | A7T  | A7U  |
|---------------------|------|------|------|------|
| ISO Viscosity Grade | 32   | 46   | 68   | 100  |
| Density @ 60°F      | 0.87 | 0.88 | 0.88 | 0.88 |
| K.V. @ 40°C (cSt)   | 32   | 46   | 68   | 100  |
| K.V. @ 100°C (cSt)  | 5.3  | 6.7  | 8.8  | 11.4 |
| Viscosity Index     | 100  | 100  | 100  | 100  |
| Flash Point (°C)    | 226  | 231  | 234  | 240  |
| Pour Point (°C)     | -22  | -22  | -22  | -22  |



Certificate Number: 9480  
ISO 9001



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### Availability

Pennine Hydraulic Oils HM AF are available in bulk, 1000 litre IBC's, 205 litre barrels, 25 litre drums and 5 litre plastic bottles.

### Storage

Barrels of lubricant should always be stored in such a way that will prevent the ingress of water when stored in the open.

### Health & Safety

Please refer to the relevant Health and Safety Data Sheet, a copy of which is freely available to all our customers.

Data represented is typical of that obtained with normal production tolerances and does not constitute a specification. The policy of Pennine Lubricants is one of continual improvement, we therefore reserve the right to change specifications without notice.



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