

# Hydra-Oil Lubricants

Hydra-Oil is specially formulated to maximize performance of Hydra-Cell pumps.

- Reduce wear
- Withstand extreme temperature changes
- Improve pump performance
- Extend pump life
- Maintain consistent viscosity
- Withstand extreme pressures

## Standard Grades

### 10W30-weight (Order Code A)

For lower temperatures and lighter loads; maintains viscosity over a wide temperature range and with repeated startups.

### 40-weight (Order Code B)

For continuous use at higher loads and temperatures; provides exceptional wear resistance and film thickness.

## Synthetic Grades

Hydra-Oil synthetic grades are a blend of synthesized hydrocarbon fluids that provide pure chemicals and a heavier, more protective oil film for bearings and pistons.

### 5W30 (Order Code G)

For stable protection in cold temperatures or severe duty.

### 15W50 (Order Code H)

For stable protection in high temperatures or severe duty.

## Food-contact Grade

The Hydra-Oil food contact grade is specially formulated for food service industry applications. Hydra-Oil SFGO grade 100 is USDA H-1 authorized, certified OU Kosher, and complies with the requirements of FDA 21 CFR 178.3570 and FDA 21 CFR 172.882. This lubricant is a polyalphaolephin based synthetic (PAO) and is suggested for use on equipment in which there may be incidental contact with an edible product.

## EPDM-compatible Grades

Hydra-Oil EPDM-compatible grades must be used in all Hydra-Cell pumps containing EPDM diaphragms. These CP-100/150 F lubricants are a custom blend of polyalkylene glycols with additives for oxidation stability, corrosion protection, and high-viscosity index. Low solubility with many different hydrocarbons provides for excellent lubricity. Hydra-Oil EPDM-compatible grades are available in 20-weight (Order Code J) and 30/40-weight (Order Code C or D) and comply with FDA 21 CFR 178.3510 (Lubricants with Incidental Food Contact).



| Hydra-Oil Characteristics     | Standard Grade |           | Synthetic Grade |           | Food Grade SFGO-100 | EPDM Compatible 20W |
|-------------------------------|----------------|-----------|-----------------|-----------|---------------------|---------------------|
|                               | 10W30          | 40W       | 5W30            | 15W50     |                     |                     |
| Order Code Letter             | A              | B         | G               | H         | E/F or K            | J/C/D               |
| Gravity, API @60°F (16°C)     | 31.1           | 28.7      | 30.4            | 30.2      | 36.9                | N/A                 |
| Flash Point °F (°C)           | 400 (204)      | 430 (221) | 445 (229)       | 470 (243) | 450 (232)           | 500 (260)           |
| Fire Point °F (°C)            | 440 (227)      | 470 (243) | N/A             | N/A       | 500 (260)           | 530 (277)           |
| Pour Point °F (°C)            | -30 (-34)      | 10 (-12)  | -65 (-54)       | -55 (-48) | -45 (-43)           | -40 (-40)           |
| Viscosity: SUS @ 100°F (38°C) | 360            | 811       | 265             | 556       | 570                 | 464                 |
|                               | SUS @ 210°F    | 63        | 85              | 60        | 90                  | 71                  |
| Viscosity Index (99°)         | 148            | 107       | 165             | 170       | 120                 | 223                 |
| Specific Gravity              | 0.88           | 0.89      | N/A             | N/A       | N/A                 | 0.992               |

# Hydra-Oil Selection Guide

## How to Order with Pump Selection

Hydra-Cell pumps are shipped with the oil reservoir filled with the appropriate Hydra-Oil selected by the customer.

1. Use the Hydra-Cell Characteristics chart on page 104 to select the Hydra-Oil best suited to your application requirements.
2. Use the chart below to select the appropriate oil letter code which corresponds to the 12th digit of the pump model ordering number. (Refer to the How to Order page in the appropriate pump product section.)
3. NOTE: All pumps equipped with EPDM diaphragms must use EPDM-compatible oil.

## Oil Recommendation

| Pump Model                             | F20 <sup>1</sup> | M03 <sup>2</sup> | D04  | D10  | D12 | D15/D17 | H25 | D35  | D66 |
|--|------------------|------------------|------|------|-----|---------|-----|------|-----|
| <b>Oil Reservoir Capacity</b>          |                  |                  |      |      |     |         |     |      |     |
| US Quarts                              | 0.125            | 1.00             | 1.10 | 1.10 | 1.5 | 2.2     | 3.3 | 7.75 | 8.0 |
| Liters                                 | 0.120            | 0.95             | 1.05 | 1.05 | 1.4 | 2.1     | 3.1 | 7.3  | 7.5 |
| <b>Metallic Pump Head Material</b>     |                  |                  |      |      |     |         |     |      |     |
| Standard-duty                          | G                | A                | G    | A    | A   | A       | A   | A    | A   |
| Continuous-duty                        | G                | G                | G    | B    | B   | B       | B   | B    | -   |
| Cold-temperature/Severe-duty           | G                | G                | G    | G    | G   | G       | G   | G    | -   |
| High-temperature/Severe-duty           | G                | G                | G    | H    | G   | H       | H   | H    | H   |
| Food-contact                           | K                | K                | K    | E    | E   | E       | E   | F    | -   |
| EPDM-compatible                        | J                | J                | J    | C    | C   | -       | C   | D    | -   |
| <b>Non-metallic Pump Head Material</b> |                  |                  |      |      |     |         |     |      |     |
| Standard-duty                          | G                | A                | -    | A    | -   | -       | A   | -    | A   |
| Continuous-duty                        | G                | G                | -    | B    | -   | -       | B   | -    | -   |
| Cold-temperature/Severe-duty           | G                | G                | -    | G    | -   | -       | G   | -    | -   |
| High-temperature/Severe-duty           | G                | G                | -    | H    | -   | -       | G   | -    | H   |
| Food-contact                           | K                | K                | -    | E    | -   | -       | E   | -    | -   |
| EPDM-compatible                        | J                | J                | -    | C    | -   | -       | C   | -    | -   |

<sup>1</sup> Includes all F20, F21 and F22 models

<sup>2</sup> Includes all D03, M03, and M03 Mono-Block models

## How to Order Separately

Replacement Hydra-Oil is available in quart and 2-1/2 gallon packages.

1. Consult your Hydra-Cell Pump Installation/Service Manual for oil change interval specifications.
2. Use the part numbers in the chart below.

| Code Letter | Oil Description                                 | Quart        |              | 2-1/2 Gallon |              |
|-------------|---|--------------|--------------|--------------|--------------|
|             |   | Single       | 6-Pack       | Single       | Twin-Pack    |
| <b>A</b>    | 10W30 for standard-duty                         | A01-114-3430 | A01-114-3431 | A01-114-3432 | A01-114-3433 |
| <b>B</b>    | 40-wt for continuous-duty                       | A01-114-3440 | A01-114-3441 | A01-114-3442 | A01-114-3443 |
| <b>C</b>    | 30/40-wt EPDM-compatible oil                    | A01-114-3402 | -            | A01-114-3403 | -            |
| <b>D</b>    | 30/40-wt EPDM-compatible oil                    | A01-114-3402 | -            | A01-114-3403 | -            |
| <b>E</b>    | Food-contact oil                                | A01-114-3410 | -            | A01-114-3411 | -            |
| <b>F</b>    | Food-contact oil                                | A01-114-3410 | -            | A01-114-3411 | -            |
| <b>G</b>    | 5W30 cold-temperature severe-duty synthetic oil | A01-114-3415 | -            | A01-114-3420 | -            |
| <b>H</b>    | 15W50 high-temp severe-duty synthetic oil       | A01-114-3416 | -            | A01-114-3421 | -            |
| <b>J</b>    | 20-wt EPDM-compatible oil                       | A01-114-3407 | -            | A01-114-3408 | -            |
| <b>K</b>    | Food-contact oil                                | A01-114-3410 | -            | A01-114-3411 | -            |