

FLUID COMPATIBILITY - HOSES

Fluid compatibility is vital for long service life and leak free function of the hydraulic system: the hose assembly (inner tube, hose outer cover, hose fittings and O-Rings) must be chemically compatible to both the fluid being conveyed through the hose and the environment of the hose itself.

The following chart shall be intended only as a guide to chemical compatibility with the internal fluid and it is not a guarantee; other combined factors in working operations as pressure, temperature, vibration ect., may impact on the service life.

LEGENDA:

- A EXCELLENT CHEMICAL RESISTANCE**
with minimum or no properties changes
- B LIMITED CHEMICAL RESISTANCE**
with moderately acceptable properties changes
- C INCOMPATIBLE / DANGEROUS**
could result in failure or injury

FLUID COMPATIBILITY CHART

| | | | | |
|--|------------|--|--------------------------|--------|
| | | 1SN / 2SN 1SC / 2SC JACK FORTHREE MASTER SLIM SERVOCOMANDO LIFT-PLUS PREMIER | SPIR EVEREST BLAST | VULCAN |
| | ISO 6743-4 | | | |

AGIP

| AGIP | ISO 6743-4 | 1SN / 2SN 1SC / 2SC JACK FORTHREE MASTER SLIM SERVOCOMANDO LIFT-PLUS PREMIER | SPIR EVEREST BLAST | VULCAN |
|-------------------|------------|--|--------------------------|--------|
| ARNICA 46 | HV | B | A | - |
| ARNICA EXTRA PLUS | HEES | B | B | - |
| ARNICA PLUS | HEES | B | A | - |
| ARNICA S46 | HFDU | B | A | - |
| OSO 32 | HM | C | A | - |
| OSO D46 | HM | C | B | - |

AVIA

| AVIA | ISO 6743-4 | 1SN / 2SN 1SC / 2SC JACK FORTHREE MASTER SLIM SERVOCOMANDO LIFT-PLUS PREMIER | SPIR EVEREST BLAST | VULCAN |
|------------------------|------------|--|--------------------------|--------|
| BIOFLUID BP32 | HEES | B | B | - |
| FLUID RSL 32 | HS | B | A | - |
| HVI 46 | HV | B | B | - |
| SYNTOFLUID F46 | HEES | A | A | - |
| SYNTOFLUID N32 | HEES | A | B | - |
| SYNTOFLUID N46 | HEES | B | A | - |
| SYNTOFLUID PE B 30 PAO | HEPR | B | A | - |
| SYNTOFLUID PE B 50 PAO | HEPR | C | B | - |

CASTROL

| CASTROL | ISO 6743-4 | 1SN / 2SN 1SC / 2SC JACK FORTHREE MASTER SLIM SERVOCOMANDO LIFT-PLUS PREMIER | SPIR EVEREST BLAST | VULCAN |
|----------------------------|------------|--|--------------------------|--------|
| AERO HF 585 B (MIL 56006H) | HH | B | A | - |
| ANVOL SWX 68 (POE BASED) | HFDU | A | A | - |
| BIOTECH ALPIN 22 | HETG | A | A | - |
| BRAYCO 717 (MIL 17111C) | HS | B | B | - |
| CARELUBE HTG | HETG | A | A | - |
| CARELUBE HY 46 | HEES | B | B | - |
| HYPIN HDH 7000 | HM | B | A | - |

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|---------------|------------|--|--------------------------|--------|
| LIFT OIL | HH | B | B | - |
| PRODUCT L 320 | HH | B | A | - |
| PRODUCT L 571 | HH | B | A | - |

CHEVRON

| | | | | |
|-----------------------|----|---|---|---|
| AW46 | HM | B | A | - |
| HYDRAULIC AW 46 | HM | B | A | - |
| MACHINE OIL AW 220 | HV | B | B | - |
| MACHINE OIL AW ISO 46 | HV | B | B | - |
| RANDO HD 68 | HM | C | B | - |
| RYCON MV | HM | B | A | - |

ESSO

| | | | | |
|--------------------|------|---|---|---|
| HYDRAULIKOEL HE 46 | HEES | A | A | - |
| NUTO H46 | HM | B | B | - |
| UNIVIS N46 | HV | B | A | - |

FUCHS

| | | | | |
|---------------------|------|---|---|---|
| ECO HYD 46S NWG | HEES | B | B | - |
| OM13 | HH | B | B | - |
| OM65 | HH | B | B | - |
| PLANTOHYD 46S | HEES | A | A | - |
| PLANTOHYD N46 | HETG | A | B | - |
| PLANTOHYD SUPER S46 | HEES | A | B | - |
| PLANTOSYN 3268 ECO | HEES | A | B | - |
| PLANTOSYN 46 HVI | HEES | B | A | - |
| RENOLIN B15 VG46 | HV | B | B | - |
| RENOLIN MR 520 | HV | B | B | - |

HOUGHTON

| | | | | |
|--------------------------------|------|---|---|---|
| COSMOLUBRIC HF 130 (POE BASED) | HFDU | C | B | - |
| HYDRAVIS BC 84005 (60°C) | HFC | A | A | - |
| ISOCORE E68 PLUS | HFC | A | A | - |
| SAFE 620 | HFC | B | B | - |
| SAFE CTF | HFC | A | A | - |
| SAFE OX40 | HFC | A | A | - |
| VITAL FLUID L46AL | HFDU | A | B | - |
| SAFE 273 CTF | HFC | A | A | - |

MOBIL

| | | | | |
|-------------------------|------|---|---|---|
| AERO HF 468 (MIL 5606H) | HH | B | A | - |
| ARCTIC EAL 224H | HETG | A | B | - |
| DTE 10 EXCEL 68 | HV | C | B | - |
| DTE 13 | HV | C | A | - |
| DTE 24 | HV | B | B | - |
| DTE 25 | HV | B | A | - |
| DTE 26 | HV | B | B | - |

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|-----------------|------|---|---|---|
| DTE EXCEL 46 | HM | C | B | - |
| DTE EXCEL 68 | HM | - | B | - |
| DTE FM 32 | HM | C | A | - |
| HYDROFLUID HFDU | HFDU | A | A | - |
| SHC 524 | HM | C | A | - |

PANOLIN

| | | | | |
|------------------|------|---|---|---|
| EP GEAR SYNTH 46 | HEES | B | B | - |
| GRO SYNTH 46 | HEES | B | B | - |
| HLP SYNTH 15 | HEES | C | B | - |
| HLP SYNTH 46 | HEES | B | A | - |
| HLP SYNTH E46 | HEES | B | A | - |
| HLP UNI 46 | HV | B | A | - |
| TRAFOSYNTH 2 | HEES | B | B | - |

Q8

| | | | | |
|-----------|------|---|---|---|
| HANDEL 68 | HM | C | B | - |
| HAYDIN | HM | B | A | - |
| HELLER 46 | HV | B | A | - |
| HOGARTH | HV | C | B | - |
| HOLBEIN | HEES | B | A | - |
| HUMMEL 46 | HM | C | A | - |

QUAKER

| | | | | |
|-----------------------|------|---|---|---|
| GREENSAVE N40 | HETG | B | B | - |
| QUINTOLUBRIC 888 | HFDU | B | B | - |
| QUINTOLUBRIC 888-46 | HFDU | B | B | - |
| QUINTOLUBRIC 888-68 | HFDU | B | B | - |
| QUINTOLUBRIC N822-300 | HFDU | B | B | - |
| QUINTOLUBRIC N852 | HEES | B | B | - |

SHELL

| | | | | |
|--------------------------------------|------|---|---|---|
| AEROSHELL FLUID 41 (MIL 5606H) | HH | B | A | - |
| AEROSHELL FLUID 602 (MIL-PRF 87252C) | HEPR | B | A | - |
| ASTRON HL46 | HH | B | A | - |
| DONAX TA | HM | C | - | - |
| IRUS FLUID DU-NA 46 | HFDU | A | A | - |
| IRUS FLUID DU-NA 68 | HFDU | A | A | - |
| NATURELLE HF-E15 | HEES | B | A | - |
| NATURELLE HF-E46 | HEES | B | A | - |
| TARGON AL PLUS | HH | A | A | - |
| TELLUS ARCTIC 32 | HM | B | B | - |
| TELLUS S1 M46 (ex TELLUS H46) | HM | B | B | - |
| TELLUS S2 M100 (ex TELLUS 100) | HM | B | A | - |
| TELLUS S2 M46 (ex TELLUS 46) | HM | B | A | - |
| TELLUS S2 M68 (ex TELLUS 68) | HM | B | A | - |
| TELLUS S2 V32 (ex TELLUST32) | HV | B | A | - |

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|--------------------------------|----|---|---|---|
| TELLUS S2 V46 (ex TELLUST46) | HV | B | A | - |
| TELLUS S2 V68 (ex TELLUST68) | HV | B | A | - |
| TELLUS S46 | HM | B | A | - |
| TELLUS S4ME46 (ex TELLUS EE46) | HM | - | A | - |
| TELLUSTX68 | HV | C | B | - |

TEXACO

| | | | | |
|----------------------|------|---|---|---|
| BIOSTAR HYDRAULIC 32 | HETG | A | A | - |
| HYDRA 46 | HEES | B | A | - |
| RANDO HD 46 | HM | B | A | - |
| RANDO HD LVZ 46 | HV | C | B | - |
| RANDO HD VZ | HV | B | B | - |
| RANDO HD Z 46 | HV | B | A | - |
| SYNSTAR HT 68 | HFDU | A | B | - |
| AZOLLA HZS 46 | HM | C | A | - |
| AZOLLA ZS 46 | HM | B | A | - |
| BYOHYDRAN SE 46 | HEES | B | B | - |
| EQUIVIS ZS 46 | HV | B | B | - |
| HYDRANSAFE HFDU 46 | HFDU | B | A | - |

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| A | | | | |
|---|---|---|---|--|
| ACETALDHEIDE | C | C | C | |
| ACETIC ACID 50% | C | B | - | |
| ACETIC ACID GLACIAL | C | C | C | |
| ACETONE (Dimethylketone) | C | C | C | |
| AEROSHELLTYPE A1, 1AC, 4 | A | B | - | |
| AEROSHELL 7A GREASE | A | B | - | |
| AEROSHELL 17 GREASE | A | B | - | |
| AEOSHELL 750 | B | C | - | |
| AIR (65°C) | B | B | A | |
| AIR (80°C) | B | B | A | |
| AIR (135°C) | C | C | A | |
| AMMONIA (Acqueous up to 30% NH3) | A | A | A | |
| AMMONIUM HYDROXIDE up to 30% NH3 | B | B | A | |
| AMMONIUM NITRATE (Acqueous solutions up to 83%) | A | A | A | |
| AMMONIUM PHOSPHATE, mon-di-tri badic (Acqueous solutions) | A | A | A | |
| AMMONIUM SULFIDE (Acqueous solutions up to 40%) | B | C | A | |

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| | | | |
|---|---|---|---|
| ANDEROL L-774 | B | C | - |
| ANDEROL L-826 | B | C | - |
| ANDEROL L-829 | B | C | - |
| ANILINE | C | C | C |
| ACQUA REGIA | C | C | C |
| ASTM OIL N°1, 100°C | A | A | B |
| ASTM OIL N°2, 100°C | A | B | B |
| ASTM OIL N°3, 100°C | A | B | C |
| ASTM FUEL A (ISO-OCTANE) | A | A | A |
| ASTM FUEL B (70% ISO-OCTANE, 30% TOLUENE) | A | B | C |
| ASTM FUEL C (50% ISO-OCTANE, 50% TOLUENE) | A | C | C |

B

| | | | |
|----------------------|---|---|---|
| BENZENE | C | C | C |
| BORIC ACID 10% 100°C | A | A | A |
| BUTANOL | A | B | B |

C

| | | | |
|---|---|---|---|
| CALCIUM CARBONATE | A | A | A |
| CALCIUM HYDROXIDE (hydrated or slaked lime) | B | A | A |
| CARBON DIOXIDE DRY (GAS) | A | A | A |
| CARBON DIOXIDE WET (GAS WITH WATER VAPOR) | A | A | A |
| CARBONIC ACID | A | A | A |
| CHLOROFORM | C | C | C |
| CITRIC ACID SOLUTION | B | A | B |
| CRUDE OIL | A | B | B |

D

| | | | |
|-------------------------|---|---|---|
| DIBENZYL ETHER | C | C | C |
| DIBUTYL PHTHALATE (DBP) | C | C | C |
| DIESEL FUEL (70°C) | A | B | C |

E

| | | | |
|------------------|---|---|---|
| ETHYL ACETATE | C | C | C |
| ETHYL ALCOHOL | A | A | A |
| ETHYL ETHER | C | C | C |
| ETHYLENE GLYCOLE | A | A | B |

F

| | | | |
|--------------------------------|---|---|---|
| FORMALDEHYDE SOLUTION UPTO 50% | B | B | B |
| FORMIC ACID | - | A | B |

G

| | | | |
|-------------------------|---|---|---|
| GLYCERINE | A | A | A |
| GREASE - ESTER BASE | - | - | - |
| GREASE - PETROLEUM BASE | A | B | B |
| GREASE - SILICONE BASE | - | - | - |

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| H | | | |
| HEPTANE | A | B | C |
| HYDROCHLORIC ACID 15% | C | C | B |
| HYDROCHLORIC ACID 37% | C | C | B |
| HYDROCYANIC ACID 10% | C | C | B |
| HYDROGEN SULPHIDE - LIQUIFIED | C | B | - |
| I | | | |
| ISOBUTYL ALCOHOL | B | B | A |
| ISOPROPYL ALCOHOL | A | B | B |
| K | | | |
| KEROSENE | A | C | C |
| L | | | |
| LARD | A | B | - |
| LUBRICATING OIL SAE 10, 20, 30 | B | B | - |
| LUBRICATING OILS (DIESTER UPTO 55°C) | B | C | - |
| M | | | |
| MERCURY | B | A | A |
| METHANOL | A | A | A |
| METHYL METHACRYLATE | C | C | B |
| METHYLETHYLKETONE (MEK) | C | C | C |
| MOTOR OIL UPTO 55°C | A | B | B |
| N | | | |
| NITRIC ACID concentrated 65% | C | C | C |
| NITRIC ACID DILUITED 10% 50°C | C | C | B |
| NITRIC ACID FUMING | C | C | C |
| NITROGEN GAS | A | A | A |
| O | | | |
| OIL SAE UNDER 40°C | A | A | B |
| OILS - CRUDE | B | C | - |
| OLEIC ACID | B | B | C |
| OLEUM | C | C | C |
| OXALIC ACID 50% | C | C | B |
| OXYGEN 80°C | B | - | A |
| P | | | |
| PARAFFIN | A | B | C |
| PHENOL | C | C | C |
| PHOSPHORIC ACID 35% | B | B | A |
| PHOSPHORIC ACID 50% | B | B | A |
| PHOSPHORIC ACID 85% | C | C | A |

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| | | | |
|--|---|---|---|
| PICRIC ACID | B | B | B |
| POTASSIUM HYDROXIDE 45% CAUSTIC POTASH | B | C | C |
| POTASSIUM SULFIDE | A | A | B |

S

| | | | |
|--|---|---|---|
| SEA WATER | B | B | B |
| SOAP SOLUTION | A | B | B |
| SODIUM BICARBONATE | A | A | A |
| SODIUM CHLORIDE | A | A | A |
| SODIUM HYDROXIDE 40% | B | A | A |
| SODIUM HYPOCHLORITE (Aqueous solution) | C | C | A |
| SODIUM SILICATE | A | A | A |
| SODIUM SULFATE | A | A | A |
| SODIUM SULFIDE | A | A | A |
| STEARIC ACID | B | B | B |
| SULPHUR DIOXIDE LIQUID | C | B | B |
| SULPHURIC ACID | C | C | C |
| SULPHURIC ACID DILUTED 20% | B | A | A |

T

| | | | |
|-----------------|---|---|---|
| TANNIC ACID | C | B | B |
| TETRAETHYL LEAD | B | C | C |
| TOLUENE | C | C | C |
| TURPENTINE | B | C | C |

U

| | | | |
|------|---|---|---|
| UREA | B | A | A |
|------|---|---|---|

V

| | | | |
|----------------|---|---|---|
| VINYL ACETATE | C | C | C |
| VINYL CHLORIDE | C | C | C |

W

| | | | |
|-------|---|---|---|
| WATER | A | A | A |
|-------|---|---|---|

X

| | | | |
|--------|---|---|---|
| XYLENE | C | C | C |
|--------|---|---|---|

Z

| | | | |
|----------------------------------|---|---|---|
| ZINC CHLORIDE (Aqueous solution) | A | A | A |
| ZINC SULPHATE (Aqueous solution) | B | B | B |

FLUID COMPATIBILITY - FITTINGS / ADAPTERS

| FLUID | CARBON STEEL |
|----------------------------|--------------|
| A | |
| ACETYLENE | B |
| AIR (OIL FREE) at 190°F | B |
| AIR (OIL FREE) at 300°F | B |
| AIR (OIL FREE) at 400°F | B |
| ALCOHOL ETHYL | C |
| ANIMAL OILS (LARD OIL) | B |
| AROMATIC FUEL -50% | - |
| AROMATIC SOLVENTS | - |
| ASPHALT | C |
| ASTM OIL #1 | A |
| ASTM OIL #2 | A |
| ASTM OIL #3 | A |
| ASTM OIL #4 | A |
| ATF OIL | A |
| AUTOMOTIVE BRAKE FLUID | - |
| B | |
| BENZENE | B |
| BRINE (SODIUM CHLORIDE) | C |
| BUTANE | A |
| C | |
| CARBON DIOXIDE | B |
| CARBON MONOXIDE | A |
| CHLORINE (DRY) | B |
| COMPRESSED AIR | B |
| CRUDE OIL | B |
| CUTTING OIL | A |
| D | |
| DIESEL FUEL | A |
| E | |
| ETHANOL | C |
| ETHERS | C |
| F | |
| FREON 11 | - |
| FREON 12 | A |
| FREON 22 | C |
| FUEL OIL | A |
| G | |
| GASOLINE | B |
| GAS - LIQUID PROPANE (LPG) | A |
| GAS - NATURAL | A |

| FLUID | CARBON STEEL |
|--|--------------|
| H | |
| HELIUM | A |
| HYDRAULIC OIL - PETROLEUM BASE | A |
| HYDRAULIC OIL - WATER BASE | A |
| HYDROGEN GAS | A |
| K | |
| KEROSENE | A |
| L | |
| LUBRICATING OIL SAE 10, 20, 30, 40, 50 | A |
| M | |
| METHANOL | A |
| MINERAL OIL | A |
| N | |
| NITROGEN | A |
| P | |
| PETROLATUM | A |
| PETROLEUM OIL (<250°F) | A |
| PROPANE | A |
| R | |
| R134A | A |
| S | |
| SEA WATER | C |
| SKYDROL 500 - TYPE 2 | A |
| SKYDROL 7000 - TYPE 2 | A |
| SOAP SOLUTIONS | C |
| STEAM (<400°F) | A |
| STODDARD SOLVENT | A |
| T | |
| TRANSMISSION FLUID (TYPE A) | A |
| TRICHLOROETHANE | B |
| W | |
| WATER | B |

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