

**FLUXANA Petrostandards**

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This catalog should give you an overview about available reference materials sorted by application.

We cannot guarantee that all values are correct and every material is still available. Please ask for a quote and the certificate of the reference material.

Unit conversion: 1oz = 29.6ml, 1gal = 128oz = 3.7843 liter

Unit conversion: 2oz = 59ml, 4oz = 118ml, 8oz = 236ml, 16oz = 473ml

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## Sulfur

## Sulfur in Light Weight Mineral Oil (25 cSt) according DIN 51400T11, DIN EN ISO 20884

| Inst. | Part#              | Appl.                 | Rem.                       | Amount  | Unit | Elements |        |
|-------|--------------------|-----------------------|----------------------------|---------|------|----------|--------|
|       |                    |                       |                            |         |      | S µg/g   | S %    |
| FX    | <b>OC-A0018-1</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 0        | 0,0000 |
| FX    | <b>OC-A0018-2</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 5        | 0,0005 |
| FX    | <b>OC-A0018-3</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 10       | 0,0010 |
| FX    | <b>OC-A0018-4</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 25       | 0,0025 |
| FX    | <b>OC-A0018-5</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 50       | 0,0050 |
| FX    | <b>OC-A0018-6</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 100      | 0,0100 |
| FX    | <b>OC-A0018-7</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 200      | 0,0200 |
| FX    | <b>OC-A0018-8</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 350      | 0,0350 |
| FX    | <b>OC-A0018-9</b>  | sulfur in mineral oil | only as set                | 118ml   |      | 500      | 0,0500 |
| FX    | <b>OC-A0018-10</b> | sulfur in mineral oil | set 9x DIN 51400 ISO 20884 | 9x118ml |      |          |        |

Sulfur concentration calculated from % sulfur in di- n-butyl sulfide

## Sulfur in Heavy Weight Mineral Oil (75 cSt)

| Inst. | Part#       | Appl.                 | Rem.    | Amount | Unit | Elements |       |
|-------|-------------|-----------------------|---------|--------|------|----------|-------|
|       |             |                       |         |        |      | S µg/g   | S %   |
| FX    | OC-A0001-1  | sulfur in mineral oil |         | 118ml  |      | 0        | 0,000 |
| FX    | OC-A0001-2  | sulfur in mineral oil |         | 118ml  |      | 100      | 0,010 |
| FX    | OC-A0001-3  | sulfur in mineral oil |         | 118ml  |      | 200      | 0,020 |
| FX    | OC-A0001-4  | sulfur in mineral oil |         | 118ml  |      | 300      | 0,030 |
| FX    | OC-A0001-5  | sulfur in mineral oil |         | 118ml  |      | 400      | 0,040 |
| FX    | OC-A0001-6  | sulfur in mineral oil |         | 118ml  |      | 500      | 0,050 |
| FX    | OC-A0001-7  | sulfur in mineral oil |         | 118ml  |      | 750      | 0,075 |
| FX    | OC-A0001-8  | sulfur in mineral oil |         | 118ml  |      | 1000     | 0,10  |
| FX    | OC-A0001-9  | sulfur in mineral oil |         | 118ml  |      | 1500     | 0,15  |
| FX    | OC-A0001-10 | sulfur in mineral oil |         | 118ml  |      | 3000     | 0,30  |
| FX    | OC-A0001-11 | sulfur in mineral oil |         | 118ml  |      | 5000     | 0,50  |
| FX    | OC-A0001-12 | sulfur in mineral oil |         | 118ml  |      | 7000     | 0,70  |
| FX    | OC-A0001-13 | sulfur in mineral oil |         | 118ml  |      | 10000    | 1,00  |
| FX    | OC-A0001-14 | sulfur in mineral oil |         | 118ml  |      | 15000    | 1,50  |
| FX    | OC-A0001-15 | sulfur in mineral oil |         | 118ml  |      | 20000    | 2,00  |
| FX    | OC-A0001-16 | sulfur in mineral oil |         | 118ml  |      | 30000    | 3,00  |
| FX    | OC-A0001-17 | sulfur in mineral oil |         | 118ml  |      | 40000    | 4,00  |
| FX    | OC-A0001-18 | sulfur in mineral oil |         | 118ml  |      | 50000    | 5,00  |
| FX    | OC-A0001-19 | sulfur in mineral oil |         | 118ml  |      | 60000    | 6,00  |
| FX    | OC-A0001-20 | sulfur in mineral oil | set 19x | 118ml  |      |          |       |

Sulfur concentration calculated from % sulfur in di- n-butyl sulfide

## Sulfur in Light Weight Mineral Oil (20 cSt)

| Inst. | Part#       | Appl.                 | Rem.    | Amount | Unit | Elements |       |
|-------|-------------|-----------------------|---------|--------|------|----------|-------|
|       |             |                       |         |        |      | S µg/g   | S %   |
| FX    | OC-A0002-1  | sulfur in mineral oil |         | 118ml  |      | 0        | 0,000 |
| FX    | OC-A0002-2  | sulfur in mineral oil |         | 118ml  |      | 100      | 0,010 |
| FX    | OC-A0002-3  | sulfur in mineral oil |         | 118ml  |      | 200      | 0,020 |
| FX    | OC-A0002-4  | sulfur in mineral oil |         | 118ml  |      | 300      | 0,030 |
| FX    | OC-A0002-5  | sulfur in mineral oil |         | 118ml  |      | 400      | 0,040 |
| FX    | OC-A0002-6  | sulfur in mineral oil |         | 118ml  |      | 500      | 0,050 |
| FX    | OC-A0002-7  | sulfur in mineral oil |         | 118ml  |      | 750      | 0,075 |
| FX    | OC-A0002-8  | sulfur in mineral oil |         | 118ml  |      | 1000     | 0,10  |
| FX    | OC-A0002-9  | sulfur in mineral oil |         | 118ml  |      | 1500     | 0,15  |
| FX    | OC-A0002-10 | sulfur in mineral oil |         | 118ml  |      | 3000     | 0,30  |
| FX    | OC-A0002-11 | sulfur in mineral oil |         | 118ml  |      | 5000     | 0,50  |
| FX    | OC-A0002-12 | sulfur in mineral oil |         | 118ml  |      | 7000     | 0,70  |
| FX    | OC-A0002-13 | sulfur in mineral oil |         | 118ml  |      | 10000    | 1,00  |
| FX    | OC-A0002-14 | sulfur in mineral oil |         | 118ml  |      | 15000    | 1,50  |
| FX    | OC-A0002-15 | sulfur in mineral oil |         | 118ml  |      | 20000    | 2,00  |
| FX    | OC-A0002-16 | sulfur in mineral oil |         | 118ml  |      | 30000    | 3,00  |
| FX    | OC-A0002-17 | sulfur in mineral oil |         | 118ml  |      | 40000    | 4,00  |
| FX    | OC-A0002-18 | sulfur in mineral oil |         | 118ml  |      | 50000    | 5,00  |
| FX    | OC-A0002-19 | sulfur in mineral oil |         | 118ml  |      | 60000    | 6,00  |
| FX    | OC-A0002-20 | sulfur in mineral oil | set 19x | 118ml  |      |          |       |

Sulfur concentration calculated from % sulfur in di- n-butyl sulfide

## Sulfur in Diesel Fuel

| Inst. | Part#       | Appl.            | Rem.             | Amount | Unit | Elements |       |
|-------|-------------|------------------|------------------|--------|------|----------|-------|
|       |             |                  |                  |        |      | S µg/g   | S %   |
| FX    | OC-A0003-1  | sulfur in diesel | no hazardous fee | 5x20ml |      | 0        | 0,000 |
| FX    | OC-A0003-2  | sulfur in diesel | no hazardous fee | 5x20ml |      | 100      | 0,010 |
| FX    | OC-A0003-3  | sulfur in diesel | no hazardous fee | 5x20ml |      | 200      | 0,020 |
| FX    | OC-A0003-4  | sulfur in diesel | no hazardous fee | 5x20ml |      | 300      | 0,030 |
| FX    | OC-A0003-5  | sulfur in diesel | no hazardous fee | 5x20ml |      | 400      | 0,040 |
| FX    | OC-A0003-6  | sulfur in diesel | no hazardous fee | 5x20ml |      | 500      | 0,050 |
| FX    | OC-A0003-7  | sulfur in diesel | no hazardous fee | 5x20ml |      | 750      | 0,075 |
| FX    | OC-A0003-8  | sulfur in diesel | no hazardous fee | 5x20ml |      | 1000     | 0,10  |
| FX    | OC-A0003-9  | sulfur in diesel | no hazardous fee | 5x20ml |      | 1500     | 0,15  |
| FX    | OC-A0003-10 | sulfur in diesel | no hazardous fee | 5x20ml |      | 3000     | 0,30  |
| FX    | OC-A0003-11 | sulfur in diesel | no hazardous fee | 5x20ml |      | 5000     | 0,50  |
| FX    | OC-A0003-12 | sulfur in diesel | no hazardous fee | 5x20ml |      | 7000     | 0,70  |
| FX    | OC-A0003-13 | sulfur in diesel | no hazardous fee | 5x20ml |      | 10000    | 1,00  |
| FX    | OC-A0003-14 | sulfur in diesel | no hazardous fee | 5x20ml |      | 15000    | 1,50  |
| FX    | OC-A0003-15 | sulfur in diesel | no hazardous fee | 5x20ml |      | 20000    | 2,00  |
| FX    | OC-A0003-16 | sulfur in diesel | no hazardous fee | 5x20ml |      | 30000    | 3,00  |
| FX    | OC-A0003-17 | sulfur in diesel | no hazardous fee | 5x20ml |      | 40000    | 4,00  |
| FX    | OC-A0003-18 | sulfur in diesel | no hazardous fee | 5x20ml |      | 50000    | 5,00  |
| FX    | OC-A0003-19 | sulfur in diesel | no hazardous fee | 5x20ml |      | 60000    | 6,00  |

| Inst. | Part#       | Appl.            | Rem.        | Amount | Unit | Elements |        |
|-------|-------------|------------------|-------------|--------|------|----------|--------|
|       |             |                  |             |        |      | S µg/g   | S %    |
| FX    | OC-A0003-20 | sulfur in diesel | only as set | 5x20ml |      | 0        | 0,000  |
| FX    | OC-A0003-21 | sulfur in diesel | only as set | 5x20ml |      | 10       | 0,001  |
| FX    | OC-A0003-22 | sulfur in diesel | only as set | 5x20ml |      | 15       | 0,0015 |
| FX    | OC-A0003-23 | sulfur in diesel | Set 3x      | 5x20ml |      |          |        |

Sulfur concentration calculated from

% sulfur in di- n-butyl sulfide

**The material comes in 20ml ampules**

**No extra costs for hazardous shipment**

## Sulfur in Light Distillate Kerosene

| Inst. | Part#       | Appl.              | Rem.    | Amount | Unit | Elements |       |
|-------|-------------|--------------------|---------|--------|------|----------|-------|
|       |             |                    |         |        |      | S µg/g   | S %   |
| FX    | OC-A0004-1  | sulfur in kerosene |         | 118ml  |      | 0        | 0,000 |
| FX    | OC-A0004-2  | sulfur in kerosene |         | 118ml  |      | 100      | 0,010 |
| FX    | OC-A0004-3  | sulfur in kerosene |         | 118ml  |      | 300      | 0,030 |
| FX    | OC-A0004-4  | sulfur in kerosene |         | 118ml  |      | 500      | 0,050 |
| FX    | OC-A0004-5  | sulfur in kerosene |         | 118ml  |      | 750      | 0,075 |
| FX    | OC-A0004-6  | sulfur in kerosene |         | 118ml  |      | 1000     | 0,10  |
| FX    | OC-A0004-7  | sulfur in kerosene |         | 118ml  |      | 2000     | 0,20  |
| FX    | OC-A0004-8  | sulfur in kerosene |         | 118ml  |      | 3000     | 0,30  |
| FX    | OC-A0004-9  | sulfur in kerosene |         | 118ml  |      | 4000     | 0,40  |
| FX    | OC-A0004-10 | sulfur in kerosene |         | 118ml  |      | 5000     | 0,50  |
| FX    | OC-A0004-11 | sulfur in kerosene |         | 118ml  |      | 10000    | 1,00  |
| FX    | OC-A0004-12 | sulfur in kerosene |         | 118ml  |      | 20000    | 2,00  |
| FX    | OC-A0004-13 | sulfur in kerosene | set 12x | 118ml  |      |          |       |

Sulfur concentration calculated from % sulfur in di- n-butyl sulfide

## Sulfur in Heavy Distillate Kerosene

| Inst. | Part#       | Appl.              | Rem.    | Amount | Unit | Elements |       |
|-------|-------------|--------------------|---------|--------|------|----------|-------|
|       |             |                    |         |        |      | S µg/g   | S %   |
| FX    | OC-A0005-1  | sulfur in kerosene |         | 118ml  |      | 0        | 0     |
| FX    | OC-A0005-2  | sulfur in kerosene |         | 118ml  |      | 100      | 0,01  |
| FX    | OC-A0005-3  | sulfur in kerosene |         | 118ml  |      | 200      | 0,02  |
| FX    | OC-A0005-4  | sulfur in kerosene |         | 118ml  |      | 300      | 0,03  |
| FX    | OC-A0005-5  | sulfur in kerosene |         | 118ml  |      | 400      | 0,04  |
| FX    | OC-A0005-6  | sulfur in kerosene |         | 118ml  |      | 500      | 0,05  |
| FX    | OC-A0005-7  | sulfur in kerosene |         | 118ml  |      | 750      | 0,075 |
| FX    | OC-A0005-8  | sulfur in kerosene |         | 118ml  |      | 1000     | 0,10  |
| FX    | OC-A0005-9  | sulfur in kerosene |         | 118ml  |      | 1500     | 0,15  |
| FX    | OC-A0005-10 | sulfur in kerosene |         | 118ml  |      | 2000     | 0,20  |
| FX    | OC-A0005-11 | sulfur in kerosene |         | 118ml  |      | 3000     | 0,30  |
| FX    | OC-A0005-12 | sulfur in kerosene |         | 118ml  |      | 4000     | 0,40  |
| FX    | OC-A0005-13 | sulfur in kerosene |         | 118ml  |      | 5000     | 0,50  |
| FX    | OC-A0005-14 | sulfur in kerosene |         | 118ml  |      | 7000     | 0,70  |
| FX    | OC-A0005-15 | sulfur in kerosene |         | 118ml  |      | 10000    | 1,00  |
| FX    | OC-A0005-16 | sulfur in kerosene |         | 118ml  |      | 15000    | 1,50  |
| FX    | OC-A0005-17 | sulfur in kerosene |         | 118ml  |      | 20000    | 2,00  |
| FX    | OC-A0005-18 | sulfur in kerosene |         | 118ml  |      | 30000    | 3,00  |
| FX    | OC-A0005-19 | sulfur in kerosene |         | 118ml  |      | 40000    | 4,00  |
| FX    | OC-A0005-20 | sulfur in kerosene |         | 118ml  |      | 50000    | 5,00  |
| FX    | OC-A0005-21 | sulfur in kerosene |         | 118ml  |      | 60000    | 6,00  |
| FX    | OC-A0005-22 | sulfur in kerosene | set 21x | 118ml  |      |          |       |

Sulfur concentration calculated from % sulfur in di- n-butyl sulfide

**Sulfur Calibration Standards in Isooctane for Gasoline & Reformulated Gasoline Analysis**  
**ASTM D2622-98 D-4294-98**

| Inst. | Part#       | Appl.               | Rem.               | Amount | Unit | Elements |       |
|-------|-------------|---------------------|--------------------|--------|------|----------|-------|
|       |             |                     |                    |        |      | S µg/g   | S %   |
| FX    | OC-A0006-1  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 0        | 0     |
| FX    | OC-A0006-2  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 10       | 0,001 |
| FX    | OC-A0006-3  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 20       | 0,002 |
| FX    | OC-A0006-4  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 30       | 0,003 |
| FX    | OC-A0006-5  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 50       | 0,005 |
| FX    | OC-A0006-6  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 100      | 0,010 |
| FX    | OC-A0006-7  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 200      | 0,020 |
| FX    | OC-A0006-8  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 300      | 0,030 |
| FX    | OC-A0006-9  | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 400      | 0,040 |
| FX    | OC-A0006-10 | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 600      | 0,060 |
| FX    | OC-A0006-11 | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 1000     | 0,10  |
| FX    | OC-A0006-12 | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 2000     | 0,20  |
| FX    | OC-A0006-13 | sulfur in isooctane | D2622-98 D-4294-98 | 5x20ml |      | 3000     | 0,30  |

Sulfur concentration calculated from % sulfur in di- n-butyl sulfide

**The material comes in 20ml bottles**

**No extra costs for hazardous shipment**

**Low Level Sulfur Calibration Standards for use on XRF Energy Dispersive or Wavelength Instruments  
ASTM D-2622-98, D-6334-98, D-6445-99**

| Inst. | Part#       | Appl.                  | Rem.                  | Amount | Unit | Elements |        |
|-------|-------------|------------------------|-----------------------|--------|------|----------|--------|
|       |             |                        |                       |        |      | S µg/g   | S %    |
| FX    | OC-A0007-1  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 0        | 0      |
| FX    | OC-A0007-2  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 5        | 0,0005 |
| FX    | OC-A0007-3  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 10       | 0,0010 |
| FX    | OC-A0007-4  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 30       | 0,0030 |
| FX    | OC-A0007-5  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 50       | 0,0050 |
| FX    | OC-A0007-6  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 75       | 0,0075 |
| FX    | OC-A0007-7  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 100      | 0,010  |
| FX    | OC-A0007-8  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 300      | 0,030  |
| FX    | OC-A0007-9  | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 500      | 0,050  |
| FX    | OC-A0007-10 | sulfur isooct./toluene | D-2622, D-4294,D-6445 | 5x20ml |      | 1000     | 0,100  |

Well characterized Thiophene & 2-Methyl thiophene are used in a low sulfur Isooctane/Toluene matrix (3:1) for this calibration set.

**The material comes in 20ml bottles**

**No extra costs for hazardous shipment**

**Mid Level Sulfur Calibration Standards  
ASTM D-2622-98, D-6334-98, D-6445-99**

| Inst. | Part#      | Appl.                  | Rem.                   | Amount | Unit | Elements |       |
|-------|------------|------------------------|------------------------|--------|------|----------|-------|
|       |            |                        |                        |        |      | S µg/g   | S %   |
| FX    | OC-A0008-1 | sulfur isooct./toluene | D-2622, D-6334, D-6445 | 5x20ml |      | 200      | 0,020 |
| FX    | OC-A0008-2 | sulfur isooct./toluene | D-2622, D-6334, D-6445 | 5x20ml |      | 400      | 0,040 |
| FX    | OC-A0008-3 | sulfur isooct./toluene | D-2622, D-6334, D-6445 | 5x20ml |      | 600      | 0,060 |
| FX    | OC-A0008-4 | sulfur isooct./toluene | D-2622, D-6334, D-6445 | 5x20ml |      | 700      | 0,070 |
| FX    | OC-A0008-5 | sulfur isooct./toluene | D-2622, D-6334, D-6445 | 5x20ml |      | 800      | 0,080 |
| FX    | OC-A0008-6 | sulfur isooct./toluene | D-2622, D-6334, D-6445 | 5x20ml |      | 900      | 0,090 |
| FX    | OC-A0008-7 | sulfur isooct./toluene | D-2622, D-6334, D-6445 | 5x20ml |      | 1100     | 0,110 |
| FX    | OC-A0008-8 | sulfur isooct./toluene | D-2622, D-6334, D-6445 | 5x20ml |      | 1200     | 0,120 |

Well characterized Thiophene & 2-Methyl thiophene are used in a low sulfur Isooctane/Toluene matrix (3:1) for this calibration set.

**The material comes in 20ml bottles**

**No extra costs for hazardous shipment**

**Sulfur in Crude Oil Standards**

| Inst. | Part#      | Appl.               | Rem.   | Amount | Unit | Elements |      |
|-------|------------|---------------------|--------|--------|------|----------|------|
|       |            |                     |        |        |      | S µg/g   | S %  |
| FX    | OC-A0009-1 | sulfur in crude oil |        | 118ml  |      | 1000     | 0,10 |
| FX    | OC-A0009-2 | sulfur in crude oil |        | 118ml  |      | 2500     | 0,25 |
| FX    | OC-A0009-3 | sulfur in crude oil |        | 118ml  |      | 5000     | 0,50 |
| FX    | OC-A0009-4 | sulfur in crude oil |        | 118ml  |      | 10000    | 1,00 |
| FX    | OC-A0009-5 | sulfur in crude oil |        | 118ml  |      | 20000    | 2,00 |
| FX    | OC-A0009-6 | sulfur in crude oil |        | 118ml  |      | 30000    | 3,00 |
| FX    | OC-A0009-7 | sulfur in crude oil |        | 118ml  |      | 40000    | 4,00 |
| FX    | OC-A0009-8 | sulfur in crude oil |        | 118ml  |      | 50000    | 5,00 |
| FX    | OC-A0009-9 | sulfur in crude oil | set 8x | 118ml  |      |          |      |

**Sulfur in Residual Oil Standards**

| Inst. | Part#      | Appl.                  | Rem.   | Amount | Unit | Elements |      |
|-------|------------|------------------------|--------|--------|------|----------|------|
|       |            |                        |        |        |      | S µg/g   | S %  |
| FX    | OC-A0010-1 | sulfur in residual oil |        | 118ml  |      | 3500     | 0,35 |
| FX    | OC-A0010-2 | sulfur in residual oil |        | 118ml  |      | 7000     | 0,70 |
| FX    | OC-A0010-3 | sulfur in residual oil |        | 118ml  |      | 10000    | 1,00 |
| FX    | OC-A0010-4 | sulfur in residual oil |        | 118ml  |      | 15000    | 1,50 |
| FX    | OC-A0010-5 | sulfur in residual oil |        | 118ml  |      | 20000    | 2,00 |
| FX    | OC-A0010-6 | sulfur in residual oil |        | 118ml  |      | 30000    | 3,00 |
| FX    | OC-A0010-7 | sulfur in residual oil |        | 118ml  |      | 40000    | 4,00 |
| FX    | OC-A0010-8 | sulfur in residual oil | set 7x | 118ml  |      |          |      |

**Low Level Sulfur Calibration Standards for use on UV****ASTM D-3120-96, D-3246-96**

| Inst. | Part#      | Appl.         | Rem.        | Amount | Unit | Elements |        |
|-------|------------|---------------|-------------|--------|------|----------|--------|
|       |            |               |             |        |      | S µg/g   | S %    |
| FX    | OC-A0054-1 | sulfur isooct | only as set | 1ml    |      | 0        | 0      |
| FX    | OC-A0054-2 | sulfur isooct | only as set | 1ml    |      | 1        | 0,0001 |
| FX    | OC-A0054-3 | sulfur isooct | only as set | 1ml    |      | 3        | 0,0003 |
| FX    | OC-A0054-4 | sulfur isooct | only as set | 1ml    |      | 10       | 0,0010 |
| FX    | OC-A0054-5 | sulfur isooct | only as set | 1ml    |      | 30       | 0,0030 |
| FX    | OC-A0054-6 | sulfur isooct | only as set | 1ml    |      | 50       | 0,0050 |
| FX    | OC-A0054-7 | sulfur isooct | only as set | 1ml    |      | 75       | 0,0075 |
| FX    | OC-A0054-8 | sulfur isooct | only as set | 1ml    |      | 100      | 0,0100 |
| FX    | OC-A0054-9 | sulfur isooct | set 8x      | 8x1ml  |      |          |        |

## Iron, Nickel, Vanadium, Sulfur

## Sulfur and Metals in Mineral Oil

| Inst. | Part#       | Appl.        | Rem.        | Amount | Unit | Elements |     |     |     |
|-------|-------------|--------------|-------------|--------|------|----------|-----|-----|-----|
|       |             |              |             |        |      | S %      | Fe  | Ni  | V   |
| FX    | OC-A0021-1  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 0,00     | 0   | 0   | 0   |
| FX    | OC-A0021-2  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 0,50     | 300 | 10  | 500 |
| FX    | OC-A0021-3  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 1,00     | 500 | 100 | 25  |
| FX    | OC-A0021-4  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | -        | 100 | 80  | 250 |
| FX    | OC-A0021-5  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 2,00     | 200 | 40  | 100 |
| FX    | OC-A0021-6  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 2,50     | 400 | 5   | 400 |
| FX    | OC-A0021-7  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 3,00     | 0   | 60  | 300 |
| FX    | OC-A0021-8  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 3,50     | 500 | 0   | 200 |
| FX    | OC-A0021-9  | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | -        | 100 | 100 | 0   |
| FX    | OC-A0021-10 | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 4,50     | 300 | 50  | 250 |
| FX    | OC-A0021-11 | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 5,00     | 200 | 20  | 500 |
| FX    | OC-A0021-12 | Fe, Ni, V, S | mineral oil | 100ml  | µg/g | 5,50     | 50  | 100 | 50  |
| FX    | OC-A0021-13 | set 12x      | mineral oil |        |      |          |     |     |     |

## Sulfur and Metals in Residual Fuel Oil

| Inst. | Part#       | Appl.        | Rem.         | Amount | Unit | Elements |     |     |     |
|-------|-------------|--------------|--------------|--------|------|----------|-----|-----|-----|
|       |             |              |              |        |      | S %      | Fe  | Ni  | V   |
| FX    | OC-A0022-1  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 0,00     | 0   | 0   | 0   |
| FX    | OC-A0022-2  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 0,50     | 300 | 10  | 500 |
| FX    | OC-A0022-3  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 1,00     | 500 | 100 | 25  |
| FX    | OC-A0022-4  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | -        | 100 | 80  | 250 |
| FX    | OC-A0022-5  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 2,00     | 200 | 40  | 100 |
| FX    | OC-A0022-6  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 2,50     | 400 | 5   | 400 |
| FX    | OC-A0022-7  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 3,00     | 0   | 60  | 300 |
| FX    | OC-A0022-8  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 3,50     | 500 | 0   | 200 |
| FX    | OC-A0022-9  | Fe, Ni, V, S | residual oil | 100ml  | µg/g | -        | 100 | 100 | 0   |
| FX    | OC-A0022-10 | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 4,50     | 300 | 50  | 250 |
| FX    | OC-A0022-11 | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 5,00     | 200 | 20  | 500 |
| FX    | OC-A0022-12 | Fe, Ni, V, S | residual oil | 100ml  | µg/g | 5,50     | 50  | 100 | 50  |
| FX    | OC-A0022-13 | set 12x      | residual oil |        |      |          |     |     |     |

## Nickel, Vanadium, Sulfur

## Sulfur and Metals in Mineral Oil

| Inst. | Part#       | Appl.    | Rem.        | Amount | Unit | Elements |     |     |
|-------|-------------|----------|-------------|--------|------|----------|-----|-----|
|       |             |          |             |        |      | S %      | Ni  | V   |
| FX    | OC-A0035-1  | Ni, V, S | mineral oil | 100ml  | µg/g | 0,00     | 0   | 0   |
| FX    | OC-A0035-2  | Ni, V, S | mineral oil | 100ml  | µg/g | 0,50     | 10  | 500 |
| FX    | OC-A0035-3  | Ni, V, S | mineral oil | 100ml  | µg/g | 1,00     | 100 | 25  |
| FX    | OC-A0035-4  | Ni, V, S | mineral oil | 100ml  | µg/g | 1,50     | 80  | 250 |
| FX    | OC-A0035-5  | Ni, V, S | mineral oil | 100ml  | µg/g | 2,00     | 40  | 100 |
| FX    | OC-A0035-6  | Ni, V, S | mineral oil | 100ml  | µg/g | 2,50     | 5   | 400 |
| FX    | OC-A0035-7  | Ni, V, S | mineral oil | 100ml  | µg/g | 3,00     | 60  | 300 |
| FX    | OC-A0035-8  | Ni, V, S | mineral oil | 100ml  | µg/g | 3,50     | 0   | 200 |
| FX    | OC-A0035-9  | Ni, V, S | mineral oil | 100ml  | µg/g | 4,00     | 100 | 0   |
| FX    | OC-A0035-10 | Ni, V, S | mineral oil | 100ml  | µg/g | 4,50     | 50  | 250 |
| FX    | OC-A0035-11 | Ni, V, S | mineral oil | 100ml  | µg/g | 5,00     | 20  | 500 |
| FX    | OC-A0035-12 | Ni, V, S | mineral oil | 100ml  | µg/g | 5,50     | 100 | 50  |
| FX    | OC-A0035-13 | Set 12x  | mineral oil |        |      |          |     |     |

## Sulfur and Metals in Residual oil

| Inst. | Part#       | Appl.    | Rem.         | Amount | Unit | Elements |     |     |
|-------|-------------|----------|--------------|--------|------|----------|-----|-----|
|       |             |          |              |        |      | S %      | Ni  | V   |
| FX    | OC-A0036-1  | Ni, V, S | residual oil | 100ml  | µg/g | 0,00     | 0   | 0   |
| FX    | OC-A0036-2  | Ni, V, S | residual oil | 100ml  | µg/g | 0,50     | 10  | 500 |
| FX    | OC-A0036-3  | Ni, V, S | residual oil | 100ml  | µg/g | 1,00     | 100 | 25  |
| FX    | OC-A0036-4  | Ni, V, S | residual oil | 100ml  | µg/g | 1,50     | 80  | 250 |
| FX    | OC-A0036-5  | Ni, V, S | residual oil | 100ml  | µg/g | 2,00     | 40  | 100 |
| FX    | OC-A0036-6  | Ni, V, S | residual oil | 100ml  | µg/g | 2,50     | 5   | 400 |
| FX    | OC-A0036-7  | Ni, V, S | residual oil | 100ml  | µg/g | 3,00     | 60  | 300 |
| FX    | OC-A0036-8  | Ni, V, S | residual oil | 100ml  | µg/g | 3,50     | 0   | 200 |
| FX    | OC-A0036-9  | Ni, V, S | residual oil | 100ml  | µg/g | 4,00     | 100 | 0   |
| FX    | OC-A0036-10 | Ni, V, S | residual oil | 100ml  | µg/g | 4,50     | 50  | 250 |
| FX    | OC-A0036-11 | Ni, V, S | residual oil | 100ml  | µg/g | 5,00     | 20  | 500 |
| FX    | OC-A0036-12 | Ni, V, S | residual oil | 100ml  | µg/g | 5,50     | 100 | 50  |
| FX    | OC-A0036-13 | Ni, V, S | residual oil |        |      |          |     |     |

## Nickel, Vanadium

**Vanadium and Nickel Standards with Manganese Internal Standard for ISO/CD 14597**  
**Vanadium Standards - Low Range for ISO/CD 14597 with 0.05% Manganese Internal Standard**

| <i>Inst.</i> | <i>Part#</i>       | <i>Appl.</i> | <i>Rem.</i>        | <i>Amount</i> | <i>Unit</i> | <i>Elements</i><br>V |
|--------------|--------------------|--------------|--------------------|---------------|-------------|----------------------|
| FX           | <b>OC-A0037-1</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0005               |
| FX           | <b>OC-A0037-2</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0025               |
| FX           | <b>OC-A0037-3</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0050               |
| FX           | <b>OC-A0037-4</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0075               |
| FX           | <b>OC-A0037-5</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0100               |
| FX           | <b>OC-A0037-6</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0125               |
| FX           | <b>OC-A0037-7</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0150               |
| FX           | <b>OC-A0037-8</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0175               |
| FX           | <b>OC-A0037-9</b>  | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0200               |
| FX           | <b>OC-A0037-10</b> | Set 9x       | xylene/mineral oil |               | %           |                      |

**Vanadium Standards - High Range for ISO/CD 14597 with 0.05% Manganese Internal Standard**

| <i>Inst.</i> | <i>Part#</i>      | <i>Appl.</i> | <i>Rem.</i>        | <i>Amount</i> | <i>Unit</i> | <i>Elements</i><br>V |
|--------------|-------------------|--------------|--------------------|---------------|-------------|----------------------|
| FX           | <b>OC-A0038-1</b> | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0000               |
| FX           | <b>OC-A0038-2</b> | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0300               |
| FX           | <b>OC-A0038-3</b> | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0400               |
| FX           | <b>OC-A0038-4</b> | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0500               |
| FX           | <b>OC-A0038-5</b> | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0600               |
| FX           | <b>OC-A0038-6</b> | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0800               |
| FX           | <b>OC-A0038-7</b> | V + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,1000               |
| FX           | <b>OC-A0038-8</b> | Set 7x       | xylene/mineral oil |               | %           |                      |

**Nickel Standards for ISO/CD 14597 with 0.05% Manganese Internal Standard**

| <i>Inst.</i> | <i>Part#</i>      | <i>Appl.</i>  | <i>Rem.</i>        | <i>Amount</i> | <i>Unit</i> | <i>Elements</i><br>Ni |
|--------------|-------------------|---------------|--------------------|---------------|-------------|-----------------------|
| FX           | <b>OC-A0039-1</b> | Ni + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0000                |
| FX           | <b>OC-A0039-2</b> | Ni + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0005                |
| FX           | <b>OC-A0039-3</b> | Ni + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0010                |
| FX           | <b>OC-A0039-4</b> | Ni + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0025                |
| FX           | <b>OC-A0039-5</b> | Ni + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0050                |
| FX           | <b>OC-A0039-6</b> | Ni + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0075                |
| FX           | <b>OC-A0039-7</b> | Ni + 0.05% Mn | xylene/mineral oil | 100ml         | %           | 0,0100                |
| FX           | <b>OC-A0039-8</b> | Set 7x        | xylene/mineral oil |               | %           |                       |

**Internal Standard****Manganese @ 0.05 Wt. % in Xylene-Mineral Oil**

| <i>Inst.</i> | <i>Part#</i>      | <i>Appl.</i> | <i>Rem.</i>            | <i>Amount</i> |
|--------------|-------------------|--------------|------------------------|---------------|
| FX           | <b>OC-A0040-1</b> | ISO/CD 14597 | Manganese Internal Std | 500ml         |

## Organometallic Single Element Standards

## Organometallic Single-Element Concentrates

Sulfur/Phosphorous free (&lt; 1 ppm)

## Highly Concentrated Liquid Organo-Metallic Standards

Stabilized

| <i>Inst.</i> | <i>Part#</i>       | <i>Appl.</i>     | <i>Rem.</i>         | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> | <i>Conc.</i> |
|--------------|--------------------|------------------|---------------------|---------------|-------------|-----------------|--------------|
| FX           | <b>OC-A0014-1</b>  | oil concentrates | with trace analysis | 25g           | %           | Aluminum        | 3,0          |
| FX           | <b>OC-A0014-2</b>  | oil concentrates | with trace analysis | 25g           | %           | Barium          | 12,5         |
| FX           | <b>OC-A0014-3</b>  | oil concentrates | with trace analysis | 25g           | %           | Boron           | 2,5          |
| FX           | <b>OC-A0014-4</b>  | oil concentrates | with trace analysis | 25g           | %           | Cadmium         | 10,0         |
| FX           | <b>OC-A0014-5</b>  | oil concentrates | with trace analysis | 25g           | %           | Calcium         | 5,0          |
| FX           | <b>OC-A0014-6</b>  | oil concentrates | with trace analysis | 25g           | %           | Chromium        | 2,5          |
| FX           | <b>OC-A0014-7</b>  | oil concentrates | with trace analysis | 25g           | %           | Cobalt          | 7,5          |
| FX           | <b>OC-A0014-8</b>  | oil concentrates | with trace analysis | 25g           | %           | Copper          | 6,0          |
| FX           | <b>OC-A0014-9</b>  | oil concentrates | with trace analysis | 25g           | %           | Iron            | 4,0          |
| FX           | <b>OC-A0014-10</b> | oil concentrates | with trace analysis | 25g           | %           | Lead            | 20,0         |
| FX           | <b>OC-A0014-11</b> | oil concentrates | with trace analysis | 25g           | %           | Magnesium       | 3,0          |
| FX           | <b>OC-A0014-12</b> | oil concentrates | with trace analysis | 25g           | %           | Manganese       | 6,0          |
| FX           | <b>OC-A0014-13</b> | oil concentrates | with trace analysis | 25g           | %           | Molybdenum      | 5,0          |
| FX           | <b>OC-A0014-14</b> | oil concentrates | with trace analysis | 25g           | %           | Nickel          | 5,0          |
| FX           | <b>OC-A0014-15</b> | oil concentrates | with trace analysis | 25g           | %           | Phosphorus      | 5,0          |
| FX           | <b>OC-A0014-16</b> | oil concentrates | with trace analysis | 25g           | %           | Praseodymium    | 3,0          |
| FX           | <b>OC-A0014-17</b> | oil concentrates | with trace analysis | 25g           | %           | Selenium        | 3,5          |
| FX           | <b>OC-A0014-18</b> | oil concentrates | with trace analysis | 25g           | %           | Strontium       | 10,0         |
| FX           | <b>OC-A0014-19</b> | oil concentrates | with trace analysis | 25g           | %           | Thallium        | 5,0          |
| FX           | <b>OC-A0014-20</b> | oil concentrates | with trace analysis | 25g           | %           | Titanium        | 5,0          |
| FX           | <b>OC-A0014-21</b> | oil concentrates | with trace analysis | 25g           | %           | Vanadium        | 2,0          |
| FX           | <b>OC-A0014-22</b> | oil concentrates | with trace analysis | 25g           | %           | Zinc            | 6,0          |
| FX           | <b>OC-A0014-23</b> | oil concentrates | with trace analysis | 25g           | %           | Zirconium       | 5,0          |

| <i>Inst.</i> | <i>Part#</i>       | <i>Appl.</i>     | <i>Rem.</i>         | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> | <i>Conc.</i> |
|--------------|--------------------|------------------|---------------------|---------------|-------------|-----------------|--------------|
| FX           | <b>OC-A0015-1</b>  | oil concentrates | with trace analysis | 50g           | %           | Aluminum        | 3,0          |
| FX           | <b>OC-A0015-2</b>  | oil concentrates | with trace analysis | 50g           | %           | Barium          | 12,5         |
| FX           | <b>OC-A0015-3</b>  | oil concentrates | with trace analysis | 50g           | %           | Boron           | 2,5          |
| FX           | <b>OC-A0015-4</b>  | oil concentrates | with trace analysis | 50g           | %           | Cadmium         | 10,0         |
| FX           | <b>OC-A0015-5</b>  | oil concentrates | with trace analysis | 50g           | %           | Calcium         | 5,0          |
| FX           | <b>OC-A0015-6</b>  | oil concentrates | with trace analysis | 50g           | %           | Chromium        | 2,5          |
| FX           | <b>OC-A0015-7</b>  | oil concentrates | with trace analysis | 50g           | %           | Cobalt          | 7,5          |
| FX           | <b>OC-A0015-8</b>  | oil concentrates | with trace analysis | 50g           | %           | Copper          | 6,0          |
| FX           | <b>OC-A0015-9</b>  | oil concentrates | with trace analysis | 50g           | %           | Iron            | 4,0          |
| FX           | <b>OC-A0015-10</b> | oil concentrates | with trace analysis | 50g           | %           | Lead            | 20,0         |
| FX           | <b>OC-A0015-11</b> | oil concentrates | with trace analysis | 50g           | %           | Magnesium       | 3,0          |
| FX           | <b>OC-A0015-12</b> | oil concentrates | with trace analysis | 50g           | %           | Manganese       | 6,0          |
| FX           | <b>OC-A0015-13</b> | oil concentrates | with trace analysis | 50g           | %           | Molybdenum      | 5,0          |
| FX           | <b>OC-A0015-14</b> | oil concentrates | with trace analysis | 50g           | %           | Nickel          | 5,0          |
| FX           | <b>OC-A0015-15</b> | oil concentrates | with trace analysis | 50g           | %           | Phosphorus      | 5,0          |
| FX           | <b>OC-A0015-16</b> | oil concentrates | with trace analysis | 50g           | %           | Praseodymium    | 3,0          |
| FX           | <b>OC-A0015-17</b> | oil concentrates | with trace analysis | 50g           | %           | Selenium        | 3,5          |
| FX           | <b>OC-A0015-18</b> | oil concentrates | with trace analysis | 50g           | %           | Strontium       | 10,0         |
| FX           | <b>OC-A0015-19</b> | oil concentrates | with trace analysis | 50g           | %           | Thallium        | 5,0          |
| FX           | <b>OC-A0015-20</b> | oil concentrates | with trace analysis | 50g           | %           | Titanium        | 5,0          |
| FX           | <b>OC-A0015-21</b> | oil concentrates | with trace analysis | 50g           | %           | Vanadium        | 2,0          |
| FX           | <b>OC-A0015-22</b> | oil concentrates | with trace analysis | 50g           | %           | Zinc            | 6,0          |
| FX           | <b>OC-A0015-23</b> | oil concentrates | with trace analysis | 50g           | %           | Zirconium       | 5,0          |

**Organometallic Single-Element Salts/Solutions**

These materials are used to establish own standard dilutions or for internal standards

| <i>Inst.</i> | <i>Part#</i>        | <i>Appl.</i>                    | <i>Rem.</i>                  | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> | <i>Conc.</i> |
|--------------|---------------------|---------------------------------|------------------------------|---------------|-------------|-----------------|--------------|
| FX           | <b>OC-0000</b>      | Baseoil                         | sulfur, phosphorus free      | 1000ml        |             |                 |              |
| FX           | <b>OC-5600-13</b>   | liquid concentrate              | with xrf analysis            | 50ml          | %           | Barium          | 13,0         |
| FX           | <b>OC-2000-15.5</b> | liquid concentrate              | with xrf analysis            | 50ml          | %           | Calcium         | 15,5         |
| FX           | <b>OC-3000-10</b>   | liquid concentrate              | with xrf analysis            | 50ml          | %           | Zink            | 10,0         |
| FX           | <b>OC-1200-3</b>    | liquid concentrate              | with xrf analysis            | 50ml          | %           | Magnesium       | 3,0          |
| FX           | <b>OC-1500-11.6</b> | liquid concentrate              | with xrf analysis            | 50ml          | %           | Phosphorus      | 11,6         |
| FX           | <b>OC-1900-10</b>   | liquid concentrate              | with xrf analysis            | 50ml          | %           | Potassium       | 10,0         |
| FX           | <b>OC-1100-5</b>    | liquid concentrate              | with xrf analysis            | 50ml          | %           | Sodium          | 5,0          |
| FX           | <b>OC-1700-23.7</b> | liquid concentrate              | with xrf analysis            | 100ml         | %           | Chlorine        | 23,7         |
| FX           | <b>OC-1600-21.9</b> | liquid concentrate              | with xrf analysis            | 100ml         | %           | Sulfur          | 21,9         |
| FX           | <b>OC-1600-35</b>   | liquid concentrate              | no smell!                    | 50ml          | %           | Sulfur          | 35,0         |
| FX           | <b>OC-3500-92.5</b> | Tetrabromethan 99%              | mutagen, hazardous*          | 5g            | %           | Bromine         | 92,5         |
| FX           | <b>OC-3500-50.9</b> | Brombenzene 99%                 | harmful, hazardous*          | 250ml         | %           | Bromine         | 50,9         |
| FX           | <b>OC-B0001-0</b>   | Ethylhexanicacid 99%            | liquid, harmful*             | 1000ml        |             | Blank           |              |
| FX           | <b>OC-B0001-1</b>   | Triphenylbismuth 99%            | powder, harmful*             | 25g           | %           | Bismuth         | 47,5         |
| FX           | <b>OC-B0001-2</b>   | Copperoctoate 98%               | powder, irritant*            | 50g           | %           | Copper          | 18,2         |
| FX           | <b>OC-B0001-3</b>   | Zirconiumoctoate 96%            | liquid*                      | 25g           | %           | Zirconium       | 13,7         |
| FX           | <b>OC-B0001-4</b>   | Tinnoctoate ~90%                | liquid, irritant*            | 100g          | %           | Tin             | 29,3         |
| FX           | <b>OC-B0001-5</b>   | Ceriumoctoate 49%               | liquid, harmful, irritant*   | 100g          | %           | Cerium          | 12,0         |
| FX           | <b>OC-B0001-6</b>   | Manganeseoctoate 40%            | liquid, flammable, irritant* | 250g          | %           | Manganese       | 6,0          |
| FX           | <b>OC-B0001-7</b>   | Nickelcyclohexanebutyrate       | powder, harmful*             | 5g            | %           | Nickel          | 13,5         |
| FX           | <b>OC-B0001-8</b>   | Vanadium phenylbutandionate     | powder, hazardous*           | 5g            | %           | Vanadium        | 13,1         |
| FX           | <b>OC-B0001-9</b>   | Octaphenylcyclotetrasiloxan 98% | powder                       | 50g           | %           | Silicon         | 14,1         |
| FX           | <b>OC-B0001-10</b>  | Aluminiumhydroxy Octanicacid    |                              | 5g            | %           | Aluminium       | 8,2          |
| FX           | <b>OC-B0001-11</b>  | Ironoctoate 52%                 | liquid                       | 50g           | %           | Iron            | 6,0          |
| FX           | <b>OC-B0001-12</b>  | Cobaltoctoate 65%               | liquid                       | 100ml         | %           | Co              | 17,0         |
| FX           | <b>OC-B0001-13</b>  | Tributylphosphat 99%            | liquid                       | 100ml         | %           | P               | 11,6         |

\*these standards have to be transported as hazardous goods

## Organometallic AA @ 1000 µg/g in hydrocarbon oil

| <i>Inst.</i> | <i>Part#</i> | <i>Appl.</i>      | <i>Rem.</i> | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> | <i>Conc.</i> |
|--------------|--------------|-------------------|-------------|---------------|-------------|-----------------|--------------|
| FX           | OC-A0028-1   | single element RM | for AA      | 100ml         | µg/g        | Aluminum        | 1000         |
| FX           | OC-A0028-2   | single element RM | for AA      | 100ml         | µg/g        | Antimony        | 1000         |
| FX           | OC-A0028-3   | single element RM | for AA      | 100ml         | µg/g        | Barium          | 1000         |
| FX           | OC-A0028-4   | single element RM | for AA      | 100ml         | µg/g        | Boron           | 1000         |
| FX           | OC-A0028-5   | single element RM | for AA      | 100ml         | µg/g        | Cadmium         | 1000         |
| FX           | OC-A0028-6   | single element RM | for AA      | 100ml         | µg/g        | Calcium         | 1000         |
| FX           | OC-A0028-7   | single element RM | for AA      | 100ml         | µg/g        | Chromium        | 1000         |
| FX           | OC-A0028-8   | single element RM | for AA      | 100ml         | µg/g        | Cobalt          | 1000         |
| FX           | OC-A0028-9   | single element RM | for AA      | 100ml         | µg/g        | Copper          | 1000         |
| FX           | OC-A0028-10  | single element RM | for AA      | 100ml         | µg/g        | Iron            | 1000         |
| FX           | OC-A0028-11  | single element RM | for AA      | 100ml         | µg/g        | Lead            | 1000         |
| FX           | OC-A0028-12  | single element RM | for AA      | 100ml         | µg/g        | Lithium         | 1000         |
| FX           | OC-A0028-13  | single element RM | for AA      | 100ml         | µg/g        | Magnesium       | 1000         |
| FX           | OC-A0028-14  | single element RM | for AA      | 100ml         | µg/g        | Manganese       | 1000         |
| FX           | OC-A0028-15  | single element RM | for AA      | 100ml         | µg/g        | Molybdenum      | 1000         |
| FX           | OC-A0028-16  | single element RM | for AA      | 100ml         | µg/g        | Nickel          | 1000         |
| FX           | OC-A0028-17  | single element RM | for AA      | 100ml         | µg/g        | Phosphorus      | 1000         |
| FX           | OC-A0028-18  | single element RM | for AA      | 100ml         | µg/g        | Potassium       | 1000         |
| FX           | OC-A0028-19  | single element RM | for AA      | 100ml         | µg/g        | Silicon         | 1000         |
| FX           | OC-A0028-20  | single element RM | for AA      | 100ml         | µg/g        | Silver          | 1000         |
| FX           | OC-A0028-21  | single element RM | for AA      | 100ml         | µg/g        | Sodium          | 1000         |
| FX           | OC-A0028-22  | single element RM | for AA      | 100ml         | µg/g        | Strontium       | 1000         |
| FX           | OC-A0028-23  | single element RM | for AA      | 100ml         | µg/g        | Tin             | 1000         |
| FX           | OC-A0028-24  | single element RM | for AA      | 100ml         | µg/g        | Titanium        | 1000         |
| FX           | OC-A0028-25  | single element RM | for AA      | 100ml         | µg/g        | Vanadium        | 1000         |
| FX           | OC-A0028-26  | single element RM | for AA      | 100ml         | µg/g        | Zinc            | 1000         |

## Organometallic ICP/XRF @ 1000 µg/g in 20cSt baseoil

| <i>Inst.</i> | <i>Part#</i> | <i>Appl.</i>      | <i>Rem.</i> | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> | <i>Conc.</i> |
|--------------|--------------|-------------------|-------------|---------------|-------------|-----------------|--------------|
| FX           | OC-A0029-1   | single element RM | for ICP/XRF | 59ml          | µg/g        | Aluminum        | 1000         |
| FX           | OC-A0029-2   | single element RM | for ICP/XRF | 59ml          | µg/g        | Antimony        | 1000         |
| FX           | OC-A0029-3   | single element RM | for ICP/XRF | 59ml          | µg/g        | Arsenic         | 1000         |
| FX           | OC-A0029-4   | single element RM | for ICP/XRF | 59ml          | µg/g        | Barium          | 1000         |
| FX           | OC-A0029-5   | single element RM | for ICP/XRF | 59ml          | µg/g        | Bismuth         | 1000         |
| FX           | OC-A0029-6   | single element RM | for ICP/XRF | 59ml          | µg/g        | Boron           | 1000         |
| FX           | OC-A0029-7   | single element RM | for ICP/XRF | 59ml          | µg/g        | Cadmium         | 1000         |
| FX           | OC-A0029-8   | single element RM | for ICP/XRF | 59ml          | µg/g        | Calcium         | 1000         |
| FX           | OC-A0029-9   | single element RM | for ICP/XRF | 59ml          | µg/g        | Chromium        | 1000         |
| FX           | OC-A0029-10  | single element RM | for ICP/XRF | 59ml          | µg/g        | Copper          | 1000         |
| FX           | OC-A0029-11  | single element RM | for ICP/XRF | 59ml          | µg/g        | Iron            | 1000         |
| FX           | OC-A0029-12  | single element RM | for ICP/XRF | 59ml          | µg/g        | Lead            | 1000         |
| FX           | OC-A0029-13  | single element RM | for ICP/XRF | 59ml          | µg/g        | Lithium         | 1000         |
| FX           | OC-A0029-14  | single element RM | for ICP/XRF | 59ml          | µg/g        | Magnesium       | 1000         |
| FX           | OC-A0029-15  | single element RM | for ICP/XRF | 59ml          | µg/g        | Manganese       | 1000         |
| FX           | OC-A0029-16  | single element RM | for ICP/XRF | 59ml          | µg/g        | Mercury         | 1000         |
| FX           | OC-A0029-17  | single element RM | for ICP/XRF | 59ml          | µg/g        | Molybdenum      | 1000         |
| FX           | OC-A0029-18  | single element RM | for ICP/XRF | 59ml          | µg/g        | Nickel          | 1000         |
| FX           | OC-A0029-19  | single element RM | for ICP/XRF | 59ml          | µg/g        | Phosphorus      | 1000         |
| FX           | OC-A0029-20  | single element RM | for ICP/XRF | 59ml          | µg/g        | Potassium       | 1000         |
| FX           | OC-A0029-21  | single element RM | for ICP/XRF | 59ml          | µg/g        | Scandium        | 1000         |
| FX           | OC-A0029-22  | single element RM | for ICP/XRF | 59ml          | µg/g        | Silicon         | 1000         |
| FX           | OC-A0029-23  | single element RM | for ICP/XRF | 59ml          | µg/g        | Silver          | 1000         |
| FX           | OC-A0029-24  | single element RM | for ICP/XRF | 59ml          | µg/g        | Sodium          | 1000         |
| FX           | OC-A0029-25  | single element RM | for ICP/XRF | 59ml          | µg/g        | Strontium       | 1000         |
| FX           | OC-A0029-26  | single element RM | for ICP/XRF | 59ml          | µg/g        | Thallium        | 1000         |
| FX           | OC-A0029-27  | single element RM | for ICP/XRF | 59ml          | µg/g        | Tin             | 1000         |
| FX           | OC-A0029-28  | single element RM | for ICP/XRF | 59ml          | µg/g        | Titanium        | 1000         |
| FX           | OC-A0029-29  | single element RM | for ICP/XRF | 59ml          | µg/g        | Vanadium        | 1000         |
| FX           | OC-A0029-30  | single element RM | for ICP/XRF | 59ml          | µg/g        | Zinc            | 1000         |
| FX           | OC-A0029-31  | single element RM | for ICP/XRF | 59ml          | µg/g        | Zirconium       | 1000         |

## Organometallic ICP/XRF @ 5000 µg/g in 75cSt baseoil

| <i>Inst.</i> | <i>Part#</i>       | <i>Appl.</i>      | <i>Rem.</i> | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> | <i>Conc.</i> |
|--------------|--------------------|-------------------|-------------|---------------|-------------|-----------------|--------------|
| FX           | <b>OC-A0030-1</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Aluminum        | 5000         |
| FX           | <b>OC-A0030-2</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Antimony        | 5000         |
| FX           | <b>OC-A0030-3</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Barium          | 5000         |
| FX           | <b>OC-A0030-4</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Bismuth         | 5000         |
| FX           | <b>OC-A0030-5</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Boron           | 5000         |
| FX           | <b>OC-A0030-6</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Cadmium         | 5000         |
| FX           | <b>OC-A0030-7</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Calcium         | 5000         |
| FX           | <b>OC-A0030-8</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Chromium        | 5000         |
| FX           | <b>OC-A0030-9</b>  | single element RM | for ICP/XRF | 59ml          | µg/g        | Copper          | 5000         |
| FX           | <b>OC-A0030-10</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Iron            | 5000         |
| FX           | <b>OC-A0030-11</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Lead            | 5000         |
| FX           | <b>OC-A0030-12</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Lithium         | 5000         |
| FX           | <b>OC-A0030-13</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Magnesium       | 5000         |
| FX           | <b>OC-A0030-14</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Manganese       | 5000         |
| FX           | <b>OC-A0030-15</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Molybdenum      | 5000         |
| FX           | <b>OC-A0030-16</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Nickel          | 5000         |
| FX           | <b>OC-A0030-17</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Phosphorus      | 5000         |
| FX           | <b>OC-A0030-18</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Potassium       | 5000         |
| FX           | <b>OC-A0030-19</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Silicon         | 5000         |
| FX           | <b>OC-A0030-20</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Silver          | 5000         |
| FX           | <b>OC-A0030-21</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Sodium          | 5000         |
| FX           | <b>OC-A0030-22</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Tin             | 5000         |
| FX           | <b>OC-A0030-23</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Titanium        | 5000         |
| FX           | <b>OC-A0030-24</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Vanadium        | 5000         |
| FX           | <b>OC-A0030-25</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Zinc            | 5000         |
| FX           | <b>OC-A0030-26</b> | single element RM | for ICP/XRF | 59ml          | µg/g        | Zirconium       | 5000         |

**Matrix Oil and Stabilizer**

| <i>Inst.</i> | <i>Part#</i>      | <i>Appl.</i>      | <i>Rem.</i> | <i>Amount</i> |
|--------------|-------------------|-------------------|-------------|---------------|
| FX           | <b>OC-A0031-1</b> | single element RM | 75 cSt      | 472ml         |
| FX           | <b>OC-A0031-2</b> | single element RM | 75 cSt      | 3.78 liter    |
| FX           | <b>OC-A0031-3</b> | single element RM | 20 cSt      | 472ml         |
| FX           | <b>OC-A0031-4</b> | single element RM | 20 cSt      | 3.78 liter    |
| FX           | <b>OC-A0031-5</b> | single element RM | Stabilizer  | 59ml          |

**Organometallic Single-Element Standards Sulfur free (< 1 ppm)  
Stabilized**

| <i>Inst.</i> | <i>Part#</i>       | <i>Appl.</i>      | <i>Rem.</i>     | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> | <i>Conc.</i> |
|--------------|--------------------|-------------------|-----------------|---------------|-------------|-----------------|--------------|
| FX           | <b>OC-A0016-1</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Aluminum        | 1000         |
| FX           | <b>OC-A0016-2</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Antimony        | 1000         |
| FX           | <b>OC-A0016-3</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Barium          | 1000         |
| FX           | <b>OC-A0016-4</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Cadmium         | 1000         |
| FX           | <b>OC-A0016-5</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Calcium         | 1000         |
| FX           | <b>OC-A0016-6</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Chromium        | 1000         |
| FX           | <b>OC-A0016-7</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Cobalt          | 1000         |
| FX           | <b>OC-A0016-8</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Copper          | 1000         |
| FX           | <b>OC-A0016-9</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Iron            | 1000         |
| FX           | <b>OC-A0016-10</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Lead            | 1000         |
| FX           | <b>OC-A0016-11</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Magnesium       | 1000         |
| FX           | <b>OC-A0016-12</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Manganese       | 1000         |
| FX           | <b>OC-A0016-13</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Molybdenum      | 1000         |
| FX           | <b>OC-A0016-14</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Nickel          | 1000         |
| FX           | <b>OC-A0016-15</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Phosphorous     | 1000         |
| FX           | <b>OC-A0016-16</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Potassium       | 1000         |
| FX           | <b>OC-A0016-17</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Scandium        | 1000         |
| FX           | <b>OC-A0016-18</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Selenium        | 1000         |
| FX           | <b>OC-A0016-19</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Silicon         | 1000         |
| FX           | <b>OC-A0016-20</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Sodium          | 1000         |
| FX           | <b>OC-A0016-21</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Strontium       | 1000         |
| FX           | <b>OC-A0016-22</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Thallium        | 1000         |
| FX           | <b>OC-A0016-23</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Tin             | 1000         |
| FX           | <b>OC-A0016-24</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Titanium        | 1000         |
| FX           | <b>OC-A0016-25</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Vanadium        | 1000         |
| FX           | <b>OC-A0016-26</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Yttrium         | 1000         |
| FX           | <b>OC-A0016-27</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Zinc            | 1000         |
| FX           | <b>OC-A0016-28</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Zirconium       | 1000         |

| <i>Inst.</i> | <i>Part#</i>       | <i>Appl.</i>      | <i>Rem.</i>     | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> | <i>Conc.</i> |
|--------------|--------------------|-------------------|-----------------|---------------|-------------|-----------------|--------------|
| FX           | <b>OC-A0017-1</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Aluminum        | 5000         |
| FX           | <b>OC-A0017-2</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Antimony        | 5000         |
| FX           | <b>OC-A0017-3</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Barium          | 5000         |
| FX           | <b>OC-A0017-4</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Cadmium         | 5000         |
| FX           | <b>OC-A0017-5</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Calcium         | 5000         |
| FX           | <b>OC-A0017-6</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Chromium        | 5000         |
| FX           | <b>OC-A0017-7</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Cobalt          | 5000         |
| FX           | <b>OC-A0017-8</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Copper          | 5000         |
| FX           | <b>OC-A0017-9</b>  | single element RM | for XRF and ICP | 50ml          | µg/g        | Iron            | 5000         |
| FX           | <b>OC-A0017-10</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Lead            | 5000         |
| FX           | <b>OC-A0017-11</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Magnesium       | 5000         |
| FX           | <b>OC-A0017-12</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Manganese       | 5000         |
| FX           | <b>OC-A0017-13</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Molybdenum      | 5000         |
| FX           | <b>OC-A0017-14</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Nickel          | 5000         |
| FX           | <b>OC-A0017-15</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Phosphorous     | 5000         |
| FX           | <b>OC-A0017-16</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Potassium       | 5000         |
| FX           | <b>OC-A0017-17</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Scandium        | 5000         |
| FX           | <b>OC-A0017-18</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Selenium        | 5000         |
| FX           | <b>OC-A0017-19</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Silicon         | 5000         |
| FX           | <b>OC-A0017-20</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Sodium          | 5000         |
| FX           | <b>OC-A0017-21</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Strontium       | 5000         |
| FX           | <b>OC-A0017-22</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Thallium        | 5000         |
| FX           | <b>OC-A0017-23</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Tin             | 5000         |
| FX           | <b>OC-A0017-24</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Titanium        | 5000         |
| FX           | <b>OC-A0017-25</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Vanadium        | 5000         |
| FX           | <b>OC-A0017-26</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Yttrium         | 5000         |
| FX           | <b>OC-A0017-27</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Zinc            | 5000         |
| FX           | <b>OC-A0017-28</b> | single element RM | for XRF and ICP | 50ml          | µg/g        | Zirconium       | 5000         |

## Chlorine

## Chlorine in Lube Oils

| <i>Inst.</i> | <i>Part#</i>      | <i>Appl.</i>          | <i>Rem.</i> | <i>Amount</i> | <i>Unit</i> | <i>Elements</i> |             |
|--------------|-------------------|-----------------------|-------------|---------------|-------------|-----------------|-------------|
|              |                   |                       |             |               |             | <i>Cl µg/g</i>  | <i>Cl %</i> |
| FX           | <b>OC-A0019-1</b> | chlorine in lube oils |             | 118ml         |             | 0               | 0,0000      |
| FX           | <b>OC-A0019-2</b> | chlorine in lube oils |             | 118ml         |             | 10              | 0,0010      |
| FX           | <b>OC-A0019-3</b> | chlorine in lube oils |             | 118ml         |             | 100             | 0,0100      |
| FX           | <b>OC-A0019-4</b> | chlorine in lube oils |             | 118ml         |             | 500             | 0,0500      |
| FX           | <b>OC-A0019-5</b> | chlorine in lube oils |             | 118ml         |             | 1000            | 0,1000      |
| FX           | <b>OC-A0019-6</b> | chlorine in lube oils |             | 118ml         |             | 10000           | 1,0000      |
| FX           | <b>OC-A0019-7</b> | chlorine in lube oils |             | 118ml         |             | 50000           | 5,0000      |
| FX           | <b>OC-A0019-8</b> | chlorine in lube oils | set 7x      | 7x118ml       |             |                 |             |

Wear Metals

21 Wear Metal Multi-Element Standard

Each Wear Metal Standard contains the below list of 21 elements in hydrocarbon oil at the stated concentration

| Inst. | Part#      | Appl.          | Rem.   | Amount | Unit | Elements |     |     |     |     |     |     |     |     |  |
|-------|------------|----------------|--------|--------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|--|
|       |            |                |        |        |      | Ag       | Al  | B   | Ba  | Ca  | Cd  | Cr  | Cu  |     |  |
| FX    | OC-A0024-1 | 21 wear metals |        | 118ml  | µg/g | 10       | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |  |
| FX    | OC-A0024-2 | 21 wear metals |        | 118ml  | µg/g | 30       | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |  |
| FX    | OC-A0024-3 | 21 wear metals |        | 118ml  | µg/g | 50       | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |  |
| FX    | OC-A0024-4 | 21 wear metals |        | 118ml  | µg/g | 100      | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |
| FX    | OC-A0024-5 | 21 wear metals |        | 118ml  | µg/g | 300      | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |  |
| FX    | OC-A0024-6 | 21 wear metals |        | 118ml  | µg/g | 500      | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |  |
| FX    | OC-A0024-7 | 21 wear metals |        | 118ml  | µg/g | 900      | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |  |
| FX    | OC-A0024-8 | 21 wear metals | Set 7x |        |      |          |     |     |     |     |     |     |     |     |  |

| Part#      | Elements |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Fe       | Mg  | Mn  | Mo  | Na  | Ni  | P   | Pb  | Si  | Sn  | Ti  | V   |     |
| OC-A0024-1 | 10       | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| OC-A0024-2 | 30       | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| OC-A0024-3 | 50       | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |
| OC-A0024-4 | 100      | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| OC-A0024-5 | 300      | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| OC-A0024-6 | 500      | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| OC-A0024-7 | 900      | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |
| OC-A0024-8 |          |     |     |     |     |     |     |     |     |     |     |     |     |

| Part#      | Zn  |
|------------|-----|
| OC-A0024-1 | 10  |
| OC-A0024-2 | 30  |
| OC-A0024-3 | 50  |
| OC-A0024-4 | 100 |
| OC-A0024-5 | 300 |
| OC-A0024-6 | 500 |
| OC-A0024-7 | 900 |
| OC-A0024-8 |     |

| Inst. | Part# | Appl. | Rem. | Amount | Unit | Elements |
|-------|-------|-------|------|--------|------|----------|
|-------|-------|-------|------|--------|------|----------|

|    |            |                |        |  |       | Ag   | Al  | B   | Ba  | Ca  | Cd  | Cr  | Cu  |
|----|------------|----------------|--------|--|-------|------|-----|-----|-----|-----|-----|-----|-----|
| FX | OC-A0025-1 | 21 wear metals |        |  | 236ml | µg/g | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| FX | OC-A0025-2 | 21 wear metals |        |  | 236ml | µg/g | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| FX | OC-A0025-3 | 21 wear metals |        |  | 236ml | µg/g | 50  | 50  | 50  | 50  | 50  | 50  | 50  |
| FX | OC-A0025-4 | 21 wear metals |        |  | 236ml | µg/g | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| FX | OC-A0025-5 | 21 wear metals |        |  | 236ml | µg/g | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| FX | OC-A0025-6 | 21 wear metals |        |  | 236ml | µg/g | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| FX | OC-A0025-7 | 21 wear metals |        |  | 236ml | µg/g | 900 | 900 | 900 | 900 | 900 | 900 | 900 |
| FX | OC-A0025-8 | 21 wear metals | Set 7x |  |       |      |     |     |     |     |     |     |     |

| Part#      | Fe  | Mg  | Mn  | Mo  | Na  | Ni  | P   | Pb  | Si  | Sn  | Ti  | V   |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| OC-A0025-1 | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| OC-A0025-2 | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| OC-A0025-3 | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |
| OC-A0025-4 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| OC-A0025-5 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| OC-A0025-6 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| OC-A0025-7 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |
| OC-A0025-8 |     |     |     |     |     |     |     |     |     |     |     |     |

| Part#      | Zn  |
|------------|-----|
| OC-A0025-1 | 10  |
| OC-A0025-2 | 30  |
| OC-A0025-3 | 50  |
| OC-A0025-4 | 100 |
| OC-A0025-5 | 300 |
| OC-A0025-6 | 500 |
| OC-A0025-7 | 900 |
| OC-A0025-8 |     |

**12 Wear Metal Multi-Element Standard**

Each Wear Metal Standard contains the below list of 12 elements in hydrocarbon oil at the stated concentration

| Inst. | Part#      | Appl.          | Rem.   | Amount | Unit | Elements |     |     |     |     |     |     |     |     |  |  |  |
|-------|------------|----------------|--------|--------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
|       |            |                |        |        |      | Ag       | Al  | Cr  | Cu  | Fe  | Mg  | Na  | Ni  |     |  |  |  |
| FX    | OC-A0026-1 | 12 wear metals |        | 118ml  | µg/g | 10       | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |  |  |  |
| FX    | OC-A0026-2 | 12 wear metals |        | 118ml  | µg/g | 30       | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |  |  |  |
| FX    | OC-A0026-3 | 12 wear metals |        | 118ml  | µg/g | 50       | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |  |  |  |
| FX    | OC-A0026-4 | 12 wear metals |        | 118ml  | µg/g | 100      | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |  |  |
| FX    | OC-A0026-5 | 12 wear metals |        | 118ml  | µg/g | 300      | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |  |  |  |
| FX    | OC-A0026-6 | 12 wear metals |        | 118ml  | µg/g | 500      | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |  |  |  |
| FX    | OC-A0026-7 | 12 wear metals |        | 118ml  | µg/g | 900      | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |  |  |  |
| FX    | OC-A0026-8 | 12 wear metals | Set 7x |        |      |          |     |     |     |     |     |     |     |     |  |  |  |

| Part#      | Pb  | Si  | Sn  | Ti  |
|------------|-----|-----|-----|-----|
| OC-A0026-1 | 10  | 10  | 10  | 10  |
| OC-A0026-2 | 30  | 30  | 30  | 30  |
| OC-A0026-3 | 50  | 50  | 50  | 50  |
| OC-A0026-4 | 100 | 100 | 100 | 100 |
| OC-A0026-5 | 300 | 300 | 300 | 300 |
| OC-A0026-6 | 500 | 500 | 500 | 500 |
| OC-A0026-7 | 900 | 900 | 900 | 900 |
| OC-A0026-8 |     |     |     |     |

| Inst. | Part#      | Appl.          | Rem.   | Amount | Unit | Elements |     |     |     |     |     |     |     |     |  |  |  |
|-------|------------|----------------|--------|--------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
|       |            |                |        |        |      | Ag       | Al  | Cr  | Cu  | Fe  | Mg  | Na  | Ni  |     |  |  |  |
| FX    | OC-A0027-1 | 12 wear metals |        | 236ml  | µg/g | 10       | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |  |  |  |
| FX    | OC-A0027-2 | 12 wear metals |        | 236ml  | µg/g | 30       | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |  |  |  |
| FX    | OC-A0027-3 | 12 wear metals |        | 236ml  | µg/g | 50       | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |  |  |  |
| FX    | OC-A0027-4 | 12 wear metals |        | 236ml  | µg/g | 100      | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |  |  |
| FX    | OC-A0027-5 | 12 wear metals |        | 236ml  | µg/g | 300      | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |  |  |  |
| FX    | OC-A0027-6 | 12 wear metals |        | 236ml  | µg/g | 500      | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |  |  |  |
| FX    | OC-A0027-7 | 12 wear metals |        | 236ml  | µg/g | 900      | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |  |  |  |
| FX    | OC-A0027-8 | 12 wear metals | Set 7x |        |      |          |     |     |     |     |     |     |     |     |  |  |  |

| Part#      | Pb  | Si | Sn  | Ti  |
|------------|-----|----|-----|-----|
| OC-A0027-1 | 10  |    | 10  | 10  |
| OC-A0027-2 | 30  |    | 30  | 30  |
| OC-A0027-3 | 50  |    | 50  | 50  |
| OC-A0027-4 | 100 |    | 100 | 100 |
| OC-A0027-5 | 300 |    | 300 | 300 |
| OC-A0027-6 | 500 |    | 500 | 500 |
| OC-A0027-7 | 900 |    | 900 | 900 |
| OC-A0027-8 |     |    |     |     |

**11 Wear Metal Multi-Element Standard containing no metallic sulfonates**

Each Wear Metal Standard contains the below list of 11 elements in hydrocarbon oil at the stated concentration

| Inst. | Part#      | Appl.          | Rem.      | Amount | Unit | Elements |     |     |     |     |     |     |     |     |     |  |
|-------|------------|----------------|-----------|--------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|       |            |                |           |        |      | Al       | Cr  | Cu  | Fe  | Mg  | Na  | Ni  | Pb  |     |     |  |
| FX    | OC-A0032-1 | 11 wear metals | no sulfur | 100ml  | µg/g |          | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |  |
| FX    | OC-A0032-2 | 11 wear metals | no sulfur | 100ml  | µg/g |          | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |  |
| FX    | OC-A0032-3 | 11 wear metals | no sulfur | 100ml  | µg/g |          | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |  |
| FX    | OC-A0032-4 | 11 wear metals | no sulfur | 100ml  | µg/g |          | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |
| FX    | OC-A0032-5 | 11 wear metals | no sulfur | 100ml  | µg/g |          | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |  |
| FX    | OC-A0032-6 | 11 wear metals | no sulfur | 100ml  | µg/g |          | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |  |
| FX    | OC-A0032-7 | 11 wear metals | no sulfur | 100ml  | µg/g |          | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |  |
| FX    | OC-A0032-8 | 11 wear metals | Set 7x    |        |      |          |     |     |     |     |     |     |     |     |     |  |

| Part#      | Si  | Sn  | Ti  |
|------------|-----|-----|-----|
| OC-A0032-1 | 10  | 10  | 10  |
| OC-A0032-2 | 30  | 30  | 30  |
| OC-A0032-3 | 50  | 50  | 50  |
| OC-A0032-4 | 100 | 100 | 100 |
| OC-A0032-5 | 300 | 300 | 300 |
| OC-A0032-6 | 500 | 500 | 500 |
| OC-A0032-7 | 900 | 900 | 900 |
| OC-A0032-8 |     |     |     |

**12 Wear Metal Multi-Element Standard containing no metallic sulfonates**

**Each Wear Metal Standard contains the below list of 12 elements in hydrocarbon oil at the stated concentration**

| Inst. | Part#      | Appl.          | Rem.      | Amount | Unit | Elements |     |     |     |     |     |     |     |     |  |
|-------|------------|----------------|-----------|--------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|--|
|       |            |                |           |        |      | Ag       | Al  | Cr  | Cu  | Fe  | Mg  | Na  | Ni  |     |  |
| FX    | OC-A0033-1 | 12 wear metals | no sulfur | 100ml  | µg/g | 10       | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |  |
| FX    | OC-A0033-2 | 12 wear metals | no sulfur | 100ml  | µg/g | 30       | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |  |
| FX    | OC-A0033-3 | 12 wear metals | no sulfur | 100ml  | µg/g | 50       | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |  |
| FX    | OC-A0033-4 | 12 wear metals | no sulfur | 100ml  | µg/g | 100      | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |
| FX    | OC-A0033-5 | 12 wear metals | no sulfur | 100ml  | µg/g | 300      | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |  |
| FX    | OC-A0033-6 | 12 wear metals | no sulfur | 100ml  | µg/g | 500      | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |  |
| FX    | OC-A0033-7 | 12 wear metals | Set 6x    |        |      |          |     |     |     |     |     |     |     |     |  |

| Part#      | Elements |     |     |     |
|------------|----------|-----|-----|-----|
|            | Pb       | Si  | Sn  | Ti  |
| OC-A0033-1 | 10       | 10  | 10  | 10  |
| OC-A0033-2 | 30       | 30  | 30  | 30  |
| OC-A0033-3 | 50       | 50  | 50  | 50  |
| OC-A0033-4 | 100      | 100 | 100 | 100 |
| OC-A0033-5 | 300      | 300 | 300 | 300 |
| OC-A0033-6 | 500      | 500 | 500 | 500 |
| OC-A0033-7 |          |     |     |     |

**20 Wear Metal Multi-Element Standard containing no metallic sulfonates**

Each Wear Metal Standard contains the below list of 20 elements in hydrocarbon oil at the stated concentration

**ASTM D-4951-96**

| Inst. | Part#      | Appl.          | Rem.                  | Amount | Unit | Elements |     |     |     |     |     |     |     |     |  |
|-------|------------|----------------|-----------------------|--------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|--|
|       |            |                |                       |        |      | Al       | B   | Ba  | Ca  | Cd  | Cr  | Cu  | Fe  |     |  |
| FX    | OC-A0013-1 | 20 wear metals | ASTM D-4951-96        | 100ml  | µg/g | 10       | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |  |
| FX    | OC-A0013-2 | 20 wear metals | ASTM D-4951-96        | 100ml  | µg/g | 30       | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |  |
| FX    | OC-A0013-3 | 20 wear metals | ASTM D-4951-96        | 100ml  | µg/g | 50       | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |  |
| FX    | OC-A0013-4 | 20 wear metals | ASTM D-4951-96        | 100ml  | µg/g | 100      | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |
| FX    | OC-A0013-5 | 20 wear metals | ASTM D-4951-96        | 100ml  | µg/g | 300      | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |  |
| FX    | OC-A0013-6 | 20 wear metals | ASTM D-4951-96        | 100ml  | µg/g | 500      | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |  |
| FX    | OC-A0013-7 | 20 wear metals | ASTM D-4951-96        | 100ml  | µg/g | 900      | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |  |
| FX    | OC-A0013-8 | 20 wear metals | ASTM D-4951-96 Set 7x | 100ml  |      |          |     |     |     |     |     |     |     |     |  |

| Part#      | Elements |     |     |     |     |     |     |     |     |     |     |     |     |  |
|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|            | Mg       | Mn  | Mo  | Na  | Ni  | P   | Pb  | Si  | Sn  | Ti  | V   | Zn  |     |  |
| OC-A0013-1 | 10       | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |  |
| OC-A0013-2 | 30       | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |  |
| OC-A0013-3 | 50       | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |  |
| OC-A0013-4 | 100      | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |
| OC-A0013-5 | 300      | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |  |
| OC-A0013-6 | 500      | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |  |
| OC-A0013-7 | 900      | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 | 900 |  |
| OC-A0013-8 |          |     |     |     |     |     |     |     |     |     |     |     |     |  |

**21 Wear Metal Multi-Element Standard containing no metallic sulfonates**

Each Wear Metal Standard contains the below list of 21 elements in hydrocarbon oil at the stated concentration

| Inst. | Part#      | Appl.          | Rem.      | Amount | Unit | Elements |     |     |     |     |     |     |     |     |  |  |
|-------|------------|----------------|-----------|--------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
|       |            |                |           |        |      | Ag       | Al  | B   | Ba  | Ca  | Cd  | Cr  | Cu  |     |  |  |
| FX    | OC-A0034-1 | 21 wear metals | no sulfur | 100ml  | µg/g | 10       | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |  |  |
| FX    | OC-A0034-2 | 21 wear metals | no sulfur | 100ml  | µg/g | 30       | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |  |  |
| FX    | OC-A0034-3 | 21 wear metals | no sulfur | 100ml  | µg/g | 50       | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |  |  |
| FX    | OC-A0034-4 | 21 wear metals | no sulfur | 100ml  | µg/g | 100      | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |  |
| FX    | OC-A0034-5 | 21 wear metals | no sulfur | 100ml  | µg/g | 300      | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |  |  |
| FX    | OC-A0034-6 | 21 wear metals | no sulfur | 100ml  | µg/g | 500      | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |  |  |
| FX    | OC-A0034-7 | 21 wear metals | Set 6x    |        |      |          |     |     |     |     |     |     |     |     |  |  |

| Part#      | Fe  | Mg  | Mn  | Mo  | Na  | Ni  | P   | Pb  | Si  | Sn  | Ti  | V   |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| OC-A0034-1 | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 10  |
| OC-A0034-2 | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| OC-A0034-3 | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |
| OC-A0034-4 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| OC-A0034-5 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| OC-A0034-6 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| OC-A0034-7 |     |     |     |     |     |     |     |     |     |     |     |     |

| Part#      | Zn  |
|------------|-----|
| OC-A0034-1 | 10  |
| OC-A0034-2 | 30  |
| OC-A0034-3 | 50  |
| OC-A0034-4 | 100 |
| OC-A0034-5 | 300 |
| OC-A0034-6 | 500 |
| OC-A0034-7 |     |

## Lubricating oil

**Elemental Analysis of Lubricant and Additive Components -  
Ca, Cl, Cu, Mg, P, S, Zn in Unused Lubricating Oils & Additives by WDXRF  
ASTM D-6443-99**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ca       | Cl    | Cu    | Mg    | P     | S     | Zn    |
| FX    | OC-A0023-1  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,030 | 0,010 | 0,200 | 0,250 | 1,000 | 0,020 |
| FX    | OC-A0023-2  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,020 | 0,050 | 0,200 | 0,020 | 0,020 | 0,250 |
| FX    | OC-A0023-3  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,200 | 0,010 | 0,040 | 0,250 | 0,150 | 0,250 |
| FX    | OC-A0023-4  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,200 | 0,050 | 0,040 | 0,020 | 1,000 | 0,020 |
| FX    | OC-A0023-5  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,020 | 0,010 | 0,040 | 0,020 | 1,000 | 0,250 |
| FX    | OC-A0023-6  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,020 | 0,050 | 0,040 | 0,250 | 0,020 | 0,020 |
| FX    | OC-A0023-7  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,200 | 0,010 | 0,200 | 0,020 | 0,020 | 0,050 |
| FX    | OC-A0023-8  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,200 | 0,050 | 0,200 | 0,250 | 1,000 | 0,250 |
| FX    | OC-A0023-9  | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,100 | 0,025 | 0,080 | 0,150 | 0,500 | 0,100 |
| FX    | OC-A0023-10 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0023-11 | lubricating oil | Set 10x     |        |      |          |       |       |       |       |       |       |

**P, S, Ca and Zn in lube oils**

**ASTM D-6481-99**

**Lubricating Oil, Elements Wt.% (Nominal Value) listed below**

| Inst. | Part#       | Appl.           | Rem.              | Amount | Unit | Elements |       |       |       |
|-------|-------------|-----------------|-------------------|--------|------|----------|-------|-------|-------|
|       |             |                 |                   |        |      | Ca       | P     | S     | Zn    |
| FX    | OC-A0041-1  | lubricating oil | only as set       | 100ml  | %    | 0,600    | 0,005 | 0,175 | 0,060 |
| FX    | OC-A0041-2  | lubricating oil | only as set       | 100ml  | %    | 0,500    | 0,200 | 0,050 | 0,080 |
| FX    | OC-A0041-3  | lubricating oil | only as set       | 100ml  | %    | 0,400    | 0,150 | 0,300 | 0,180 |
| FX    | OC-A0041-4  | lubricating oil | only as set       | 100ml  | %    | 0,260    | 0,250 | 0,150 | 0,120 |
| FX    | OC-A0041-5  | lubricating oil | only as set       | 100ml  | %    | 0,005    | 0,005 | 0,450 | 0,070 |
| FX    | OC-A0041-6  | lubricating oil | only as set       | 100ml  | %    | 0,400    | 0,025 | 0,350 | 0,100 |
| FX    | OC-A0041-7  | lubricating oil | only as set       | 100ml  | %    | 0,300    | 0,060 | 0,250 | 0,120 |
| FX    | OC-A0041-8  | lubricating oil | only as set       | 100ml  | %    | 0,200    | 0,100 | 0,450 | 0,100 |
| FX    | OC-A0041-9  | lubricating oil | only as set       | 100ml  | %    | 0,060    | 0,080 | 0,300 | 0,130 |
| FX    | OC-A0041-10 | lubricating oil | only as set       | 100ml  | %    | 0,060    | 0,050 | 0,200 | 0,050 |
| FX    | OC-A0041-11 | lubricating oil | only as set       | 100ml  | %    | 0,050    | 0,120 | 0,100 | 0,075 |
| FX    | OC-A0041-12 | lubricating oil | only as set       | 100ml  | %    | 0,025    | 0,150 | 0,200 | 0,130 |
| FX    | OC-A0041-13 | lubricating oil | only as set       | 100ml  | %    | 0,005    | 0,200 | 0,400 | 0,150 |
| FX    | OC-A0041-14 | lubricating oil | only as set       | 100ml  | %    | 0,170    | 0,250 | 0,550 | 0,110 |
| FX    | OC-A0041-15 | lubricating oil | only as set       | 100ml  | %    | 0,100    | 0,100 | 0,200 | 0,200 |
| FX    | OC-A0041-16 | lubricating oil | only as set       | 100ml  | %    | 0,010    | 0,010 | 0,600 | 0,250 |
| FX    | OC-A0041-17 | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0041-18 | lubricating oil | D-6481-99 Set 17x |        |      |          |       |       |       |

## Ca, Cl, P, S and Zn in lube oils

Lubricating Oil, Elements Wt.% (Nominal Value) listed below

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ca       | Cl    | P     | S     | Zn    |
| FX    | OC-A0042-1  | lubricating oil | only as set | 100ml  | %    | 0,600    | 0,100 | 0,005 | 0,175 | 0,060 |
| FX    | OC-A0042-2  | lubricating oil | only as set | 100ml  | %    | 0,500    | 0,000 | 0,200 | 0,050 | 0,080 |
| FX    | OC-A0042-3  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,010 | 0,150 | 0,300 | 0,180 |
| FX    | OC-A0042-4  | lubricating oil | only as set | 100ml  | %    | 0,260    | 0,500 | 0,250 | 0,150 | 0,120 |
| FX    | OC-A0042-5  | lubricating oil | only as set | 100ml  | %    | 0,005    | 1,000 | 0,005 | 0,450 | 0,070 |
| FX    | OC-A0042-6  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,400 | 0,025 | 0,350 | 0,100 |
| FX    | OC-A0042-7  | lubricating oil | only as set | 100ml  | %    | 0,300    | 0,100 | 0,060 | 0,250 | 0,120 |
| FX    | OC-A0042-8  | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,010 | 0,100 | 0,450 | 0,100 |
| FX    | OC-A0042-9  | lubricating oil | only as set | 100ml  | %    | 0,060    | 0,050 | 0,080 | 0,300 | 0,130 |
| FX    | OC-A0042-10 | lubricating oil | only as set | 100ml  | %    | 0,060    | 0,200 | 0,050 | 0,200 | 0,050 |
| FX    | OC-A0042-11 | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,500 | 0,120 | 0,100 | 0,075 |
| FX    | OC-A0042-12 | lubricating oil | only as set | 100ml  | %    | 0,025    | 0,800 | 0,150 | 0,200 | 0,130 |
| FX    | OC-A0042-13 | lubricating oil | only as set | 100ml  | %    | 0,005    | 1,000 | 0,200 | 0,400 | 0,150 |
| FX    | OC-A0042-14 | lubricating oil | only as set | 100ml  | %    | 0,170    | 0,600 | 0,250 | 0,550 | 0,110 |
| FX    | OC-A0042-15 | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,200 | 0,100 | 0,200 | 0,200 |
| FX    | OC-A0042-16 | lubricating oil | only as set | 100ml  | %    | 0,010    | 0,400 | 0,010 | 0,600 | 0,250 |
| FX    | OC-A0042-17 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0042-18 | lubricating oil | Set 17x     |        |      |          |       |       |       |       |

**Elemental Analysis of Lubricant and Additive Components -  
Barium, Calcium, Phosphorus, Sulfur, and Zinc by WD-XRF Spectroscopy  
ASTM D-4927-96**

| Inst. | Part#       | Appl.           | Rem.              | Amount | Unit | Elements |       |       |       |       |
|-------|-------------|-----------------|-------------------|--------|------|----------|-------|-------|-------|-------|
|       |             |                 |                   |        |      | Ba       | Ca    | P     | S     | Zn    |
| FX    | OC-A0011-1  | lubricating oil | only as set       | 100ml  | %    | 0,100    | 0,600 | 0,005 | 0,175 | 0,060 |
| FX    | OC-A0011-2  | lubricating oil | only as set       | 100ml  | %    | 0,175    | 0,500 | 0,200 | 0,050 | 0,080 |
| FX    | OC-A0011-3  | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,400 | 0,150 | 0,300 | 0,180 |
| FX    | OC-A0011-4  | lubricating oil | only as set       | 100ml  | %    | 0,025    | 0,260 | 0,250 | 0,150 | 0,120 |
| FX    | OC-A0011-5  | lubricating oil | only as set       | 100ml  | %    | 0,150    | 0,005 | 0,005 | 0,450 | 0,070 |
| FX    | OC-A0011-6  | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,400 | 0,025 | 0,350 | 0,100 |
| FX    | OC-A0011-7  | lubricating oil | only as set       | 100ml  | %    | 0,200    | 0,300 | 0,060 | 0,250 | 0,120 |
| FX    | OC-A0011-8  | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,200 | 0,100 | 0,450 | 0,100 |
| FX    | OC-A0011-9  | lubricating oil | only as set       | 100ml  | %    | 0,100    | 0,060 | 0,080 | 0,300 | 0,130 |
| FX    | OC-A0011-10 | lubricating oil | only as set       | 100ml  | %    | 0,050    | 0,060 | 0,050 | 0,200 | 0,050 |
| FX    | OC-A0011-11 | lubricating oil | only as set       | 100ml  | %    | 0,075    | 0,050 | 0,120 | 0,100 | 0,075 |
| FX    | OC-A0011-12 | lubricating oil | only as set       | 100ml  | %    | 0,010    | 0,025 | 0,150 | 0,200 | 0,130 |
| FX    | OC-A0011-13 | lubricating oil | only as set       | 100ml  | %    | 0,005    | 0,005 | 0,200 | 0,400 | 0,150 |
| FX    | OC-A0011-14 | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,170 | 0,250 | 0,550 | 0,110 |
| FX    | OC-A0011-15 | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,100 | 0,100 | 0,200 | 0,200 |
| FX    | OC-A0011-16 | lubricating oil | only as set       | 100ml  | %    | 0,005    | 0,010 | 0,010 | 0,600 | 0,250 |
| FX    | OC-A0011-17 | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0011-18 | lubricating oil | D-4927-96 Set 17x | 100ml  |      |          |       |       |       |       |

**Lubricating Oil, Elements Wt.% (Nominal Value) listed below  
ASTM D-4927-96**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ba       | Ca    | Cl    | P     | S     | Zn    |
| FX    | OC-A0043-1  | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,600 | 0,100 | 0,005 | 0,175 | 0,060 |
| FX    | OC-A0043-2  | lubricating oil | only as set | 100ml  | %    | 0,175    | 0,500 | 0,000 | 0,200 | 0,050 | 0,080 |
| FX    | OC-A0043-3  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,400 | 0,010 | 0,150 | 0,300 | 0,180 |
| FX    | OC-A0043-4  | lubricating oil | only as set | 100ml  | %    | 0,025    | 0,260 | 0,500 | 0,250 | 0,150 | 0,120 |
| FX    | OC-A0043-5  | lubricating oil | only as set | 100ml  | %    | 0,150    | 0,005 | 1,000 | 0,005 | 0,450 | 0,070 |
| FX    | OC-A0043-6  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,400 | 0,400 | 0,025 | 0,350 | 0,100 |
| FX    | OC-A0043-7  | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,300 | 0,100 | 0,060 | 0,250 | 0,120 |
| FX    | OC-A0043-8  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,200 | 0,010 | 0,100 | 0,450 | 0,100 |
| FX    | OC-A0043-9  | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,060 | 0,050 | 0,080 | 0,300 | 0,130 |
| FX    | OC-A0043-10 | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,060 | 0,200 | 0,050 | 0,200 | 0,050 |
| FX    | OC-A0043-11 | lubricating oil | only as set | 100ml  | %    | 0,075    | 0,050 | 0,500 | 0,120 | 0,100 | 0,075 |
| FX    | OC-A0043-12 | lubricating oil | only as set | 100ml  | %    | 0,010    | 0,025 | 0,800 | 0,150 | 0,200 | 0,130 |
| FX    | OC-A0043-13 | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,005 | 1,000 | 0,200 | 0,400 | 0,150 |
| FX    | OC-A0043-14 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,170 | 0,600 | 0,250 | 0,550 | 0,110 |
| FX    | OC-A0043-15 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,100 | 0,200 | 0,100 | 0,200 | 0,200 |
| FX    | OC-A0043-16 | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,010 | 0,400 | 0,010 | 0,600 | 0,250 |
| FX    | OC-A0043-17 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0043-18 | lubricating oil | Set 17x     |        |      |          |       |       |       |       |       |

## Lubricating Oil, Elements Wt.% (Nominal Value) listed below

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ca       | Mg    | P     | S     | Zn    |
| FX    | OC-A0044-1  | lubricating oil | only as set | 100ml  | %    | 0,600    | 0,100 | 0,005 | 0,175 | 0,060 |
| FX    | OC-A0044-2  | lubricating oil | only as set | 100ml  | %    | 0,500    | 0,150 | 0,200 | 0,050 | 0,080 |
| FX    | OC-A0044-3  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,350 | 0,150 | 0,300 | 0,180 |
| FX    | OC-A0044-4  | lubricating oil | only as set | 100ml  | %    | 0,260    | 0,225 | 0,250 | 0,150 | 0,120 |
| FX    | OC-A0044-5  | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,450 | 0,005 | 0,450 | 0,070 |
| FX    | OC-A0044-6  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,500 | 0,025 | 0,350 | 0,100 |
| FX    | OC-A0044-7  | lubricating oil | only as set | 100ml  | %    | 0,300    | 0,325 | 0,060 | 0,250 | 0,120 |
| FX    | OC-A0044-8  | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,250 | 0,100 | 0,450 | 0,100 |
| FX    | OC-A0044-9  | lubricating oil | only as set | 100ml  | %    | 0,060    | 0,100 | 0,080 | 0,300 | 0,130 |
| FX    | OC-A0044-10 | lubricating oil | only as set | 100ml  | %    | 0,060    | 0,400 | 0,050 | 0,200 | 0,050 |
| FX    | OC-A0044-11 | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,300 | 0,120 | 0,100 | 0,075 |
| FX    | OC-A0044-12 | lubricating oil | only as set | 100ml  | %    | 0,025    | 0,200 | 0,150 | 0,200 | 0,130 |
| FX    | OC-A0044-13 | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,375 | 0,200 | 0,400 | 0,150 |
| FX    | OC-A0044-14 | lubricating oil | only as set | 100ml  | %    | 0,170    | 0,175 | 0,250 | 0,550 | 0,110 |
| FX    | OC-A0044-15 | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,425 | 0,100 | 0,200 | 0,200 |
| FX    | OC-A0044-16 | lubricating oil | only as set | 100ml  | %    | 0,010    | 0,275 | 0,010 | 0,600 | 0,250 |
| FX    | OC-A0044-17 | lubricating oil | Set 16x     |        |      |          |       |       |       |       |

**Lubricating Oil, Elements Wt.% (Nominal Value) listed below  
Designed for ASTM D-4628-97 & D-4927-98**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ba       | Ca    | Mg    | P     | S     | Zn    |
| FX    | OC-A0045-1  | lubricating oil | only as set | 100ml  | %    | 0,025    | 0,600 | 0,100 | 0,005 | 0,175 | 0,060 |
| FX    | OC-A0045-2  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,500 | 0,150 | 0,200 | 0,050 | 0,080 |
| FX    | OC-A0045-3  | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,400 | 0,350 | 0,150 | 0,300 | 0,180 |
| FX    | OC-A0045-4  | lubricating oil | only as set | 100ml  | %    | 0,175    | 0,260 | 0,225 | 0,250 | 0,150 | 0,120 |
| FX    | OC-A0045-5  | lubricating oil | only as set | 100ml  | %    | 0,150    | 0,005 | 0,450 | 0,005 | 0,450 | 0,070 |
| FX    | OC-A0045-6  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,400 | 0,500 | 0,025 | 0,350 | 0,100 |
| FX    | OC-A0045-7  | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,300 | 0,325 | 0,060 | 0,250 | 0,120 |
| FX    | OC-A0045-8  | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,200 | 0,250 | 0,100 | 0,450 | 0,100 |
| FX    | OC-A0045-9  | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,060 | 0,100 | 0,080 | 0,300 | 0,130 |
| FX    | OC-A0045-10 | lubricating oil | only as set | 100ml  | %    | 0,075    | 0,060 | 0,400 | 0,050 | 0,200 | 0,050 |
| FX    | OC-A0045-11 | lubricating oil | only as set | 100ml  | %    | 0,010    | 0,050 | 0,300 | 0,120 | 0,100 | 0,075 |
| FX    | OC-A0045-12 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,025 | 0,200 | 0,150 | 0,200 | 0,130 |
| FX    | OC-A0045-13 | lubricating oil | only as set | 100ml  | %    | 0,175    | 0,005 | 0,375 | 0,200 | 0,400 | 0,150 |
| FX    | OC-A0045-14 | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,170 | 0,175 | 0,250 | 0,550 | 0,110 |
| FX    | OC-A0045-15 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,100 | 0,425 | 0,100 | 0,200 | 0,200 |
| FX    | OC-A0045-16 | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,010 | 0,275 | 0,010 | 0,600 | 0,250 |
| FX    | OC-A0045-17 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0045-18 | lubricating oil | Set 17x     |        |      |          |       |       |       |       |       |

**P, S, Ca and Zn in lube oils by EDXRF  
ASTM D-6481-99**

| Inst. | Part#       | Appl.           | Rem.              | Amount | Unit | Elements |       |       |       |
|-------|-------------|-----------------|-------------------|--------|------|----------|-------|-------|-------|
|       |             |                 |                   |        |      | Ca       | P     | S     | Zn    |
| FX    | OC-A0012-1  | lubricating oil | only as set       | 100ml  | %    | 0,005    | 0,005 | 0,050 | 0,050 |
| FX    | OC-A0012-2  | lubricating oil | only as set       | 100ml  | %    | 0,600    | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0012-3  | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,300 | 0,000 | 0,000 |
| FX    | OC-A0012-4  | lubricating oil | only as set       | 100ml  | %    | 1,000    | 0,000 | 1,000 | 0,000 |
| FX    | OC-A0012-5  | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,300 |
| FX    | OC-A0012-6  | lubricating oil | only as set       | 100ml  | %    | 0,005    | 0,250 | 0,800 | 0,300 |
| FX    | OC-A0012-7  | lubricating oil | only as set       | 100ml  | %    | 0,500    | 0,150 | 0,500 | 0,150 |
| FX    | OC-A0012-8  | lubricating oil | only as set       | 100ml  | %    | 0,010    | 0,200 | 0,100 | 0,250 |
| FX    | OC-A0012-9  | lubricating oil | only as set       | 100ml  | %    | 0,050    | 0,010 | 0,400 | 0,075 |
| FX    | OC-A0012-10 | lubricating oil | only as set       | 100ml  | %    | 0,100    | 0,150 | 0,200 | 0,200 |
| FX    | OC-A0012-11 | lubricating oil | only as set       | 100ml  | %    | 0,200    | 0,200 | 0,800 | 0,100 |
| FX    | OC-A0012-12 | lubricating oil | only as set       | 100ml  | %    | 0,400    | 0,005 | 0,800 | 0,300 |
| FX    | OC-A0012-13 | lubricating oil | only as set       | 100ml  | %    | 0,600    | 0,100 | 0,500 | 0,050 |
| FX    | OC-A0012-14 | lubricating oil | only as set       | 100ml  | %    | 0,800    | 0,010 | 0,050 | 0,100 |
| FX    | OC-A0012-15 | lubricating oil | only as set       | 100ml  | %    | 1,000    | 0,300 | 1,000 | 0,150 |
| FX    | OC-A0012-16 | lubricating oil | only as set       | 100ml  | %    | 0,400    | 0,050 | 0,600 | 0,250 |
| FX    | OC-A0012-17 | lubricating oil | only as set       | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0012-18 | lubricating oil | D-6481-99 Set 17x |        |      |          |       |       |       |

**Lubricating Oil, Elements Wt.% (Nominal Value) listed below  
ASTM D-6481-99**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ca       | P     | S     | Zn    | Mg    |
| FX    | OC-A0046-1  | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,005 | 0,050 | 0,050 | 0,100 |
| FX    | OC-A0046-2  | lubricating oil | only as set | 100ml  | %    | 0,600    | 0,000 | 0,000 | 0,000 | 0,150 |
| FX    | OC-A0046-3  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,300 | 0,000 | 0,000 | 0,350 |
| FX    | OC-A0046-4  | lubricating oil | only as set | 100ml  | %    | 1,000    | 0,000 | 1,000 | 0,000 | 0,023 |
| FX    | OC-A0046-5  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,300 | 0,450 |
| FX    | OC-A0046-6  | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,250 | 0,800 | 0,300 | 0,500 |
| FX    | OC-A0046-7  | lubricating oil | only as set | 100ml  | %    | 0,500    | 0,150 | 0,500 | 0,150 | 0,325 |
| FX    | OC-A0046-8  | lubricating oil | only as set | 100ml  | %    | 0,010    | 0,200 | 0,100 | 0,250 | 0,250 |
| FX    | OC-A0046-9  | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,010 | 0,400 | 0,075 | 0,050 |
| FX    | OC-A0046-10 | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,150 | 0,200 | 0,200 | 0,400 |
| FX    | OC-A0046-11 | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,200 | 0,800 | 0,100 | 0,300 |
| FX    | OC-A0046-12 | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,005 | 0,800 | 0,300 | 0,200 |
| FX    | OC-A0046-13 | lubricating oil | only as set | 100ml  | %    | 0,600    | 0,100 | 0,500 | 0,050 | 0,375 |
| FX    | OC-A0046-14 | lubricating oil | only as set | 100ml  | %    | 0,800    | 0,010 | 0,050 | 0,100 | 0,175 |
| FX    | OC-A0046-15 | lubricating oil | only as set | 100ml  | %    | 1,000    | 0,300 | 1,000 | 0,015 | 0,425 |
| FX    | OC-A0046-16 | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,050 | 0,600 | 0,250 | 0,275 |
| FX    | OC-A0046-17 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0046-18 | lubricating oil | Set 17x     |        |      |          |       |       |       |       |

**Lubricating Oil, Elements Wt.% (Nominal Value) listed below**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|
|       |             |                 |             |        |      | Ca       | P     | S     | Zn    |
| FX    | OC-A0047-1  | lubricating oil | only as set | 100ml  | %    | 0,500    | 1,000 | 0,500 | 0,500 |
| FX    | OC-A0047-2  | lubricating oil | only as set | 100ml  | %    | 3,000    | 1,000 | 3,000 | 2,000 |
| FX    | OC-A0047-3  | lubricating oil | only as set | 100ml  | %    | 2,000    | 1,250 | 1,000 | 1,500 |
| FX    | OC-A0047-4  | lubricating oil | only as set | 100ml  | %    | 5,000    | 1,500 | 0,500 | 1,200 |
| FX    | OC-A0047-5  | lubricating oil | only as set | 100ml  | %    | 4,000    | 0,500 | 1,500 | 0,750 |
| FX    | OC-A0047-6  | lubricating oil | only as set | 100ml  | %    | 2,500    | 0,750 | 4,000 | 1,000 |
| FX    | OC-A0047-7  | lubricating oil | only as set | 100ml  | %    | 4,000    | 0,500 | 2,000 | 1,250 |
| FX    | OC-A0047-8  | lubricating oil | only as set | 100ml  | %    | 0,500    | 2,000 | 5,000 | 1,000 |
| FX    | OC-A0047-9  | lubricating oil | only as set | 100ml  | %    | 1,000    | 0,750 | 2,000 | 1,500 |
| FX    | OC-A0047-10 | lubricating oil | only as set | 100ml  | %    | 2,500    | 1,200 | 3,000 | 0,500 |
| FX    | OC-A0047-11 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0047-12 | lubricating oil | Set 11x     |        |      |          |       |       |       |

**Lubricating Oil, Elements, WDXRF ASTM Method Wt.% (Nominal Value) listed below  
Designed for ASTM D-6443-99**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ca       | Cl    | Cu    | Mg    | P     | S     | Zn    |
| FX    | OC-A0048-1  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,030 | 0,010 | 0,200 | 0,250 | 1,000 | 0,020 |
| FX    | OC-A0048-2  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,020 | 0,050 | 0,200 | 0,020 | 0,020 | 0,250 |
| FX    | OC-A0048-3  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,200 | 0,010 | 0,040 | 0,250 | 0,150 | 0,250 |
| FX    | OC-A0048-4  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,200 | 0,050 | 0,040 | 0,020 | 1,000 | 0,020 |
| FX    | OC-A0048-5  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,020 | 0,010 | 0,040 | 0,020 | 1,000 | 0,250 |
| FX    | OC-A0048-6  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,020 | 0,050 | 0,040 | 0,250 | 0,020 | 0,020 |
| FX    | OC-A0048-7  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,200 | 0,010 | 0,200 | 0,020 | 0,020 | 0,050 |
| FX    | OC-A0048-8  | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,200 | 0,050 | 0,200 | 0,250 | 1,000 | 0,250 |
| FX    | OC-A0048-9  | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,100 | 0,025 | 0,080 | 0,150 | 0,500 | 0,100 |
| FX    | OC-A0048-10 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0048-11 | lubricating oil | Set 10x     |        |      |          |       |       |       |       |       |       |

**Lubricating Oil, Elements, WDXRF ASTM Method Wt.% (Nominal Value) listed below  
Designed for ASTM D-4628-97 & D-4927-96 & D-4951-96 & D-6443-99**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ba       | Ca    | Cl    | Cu    | Mg    | P     | S     | Zn    |
| FX    | OC-A0049-1  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,020 | 0,030 | 0,010 | 0,200 | 0,250 | 1,000 | 0,020 |
| FX    | OC-A0049-2  | lubricating oil | only as set | 100ml  | %    | 0,250    | 0,020 | 0,020 | 0,050 | 0,200 | 0,020 | 0,020 | 0,250 |
| FX    | OC-A0049-3  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,020 | 0,200 | 0,010 | 0,040 | 0,250 | 0,150 | 0,250 |
| FX    | OC-A0049-4  | lubricating oil | only as set | 100ml  | %    | 0,250    | 0,020 | 0,200 | 0,050 | 0,040 | 0,020 | 1,000 | 0,020 |
| FX    | OC-A0049-5  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,400 | 0,020 | 0,010 | 0,040 | 0,020 | 1,000 | 0,250 |
| FX    | OC-A0049-6  | lubricating oil | only as set | 100ml  | %    | 0,250    | 0,400 | 0,020 | 0,050 | 0,040 | 0,250 | 0,020 | 0,020 |
| FX    | OC-A0049-7  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,400 | 0,200 | 0,010 | 0,200 | 0,020 | 0,020 | 0,050 |
| FX    | OC-A0049-8  | lubricating oil | only as set | 100ml  | %    | 0,250    | 0,400 | 0,200 | 0,050 | 0,200 | 0,250 | 1,000 | 0,250 |
| FX    | OC-A0049-9  | lubricating oil | only as set | 100ml  | %    | 0,130    | 0,200 | 0,100 | 0,025 | 0,080 | 0,150 | 0,500 | 0,100 |
| FX    | OC-A0049-10 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0049-11 | lubricating oil | Set 10x     |        |      |          |       |       |       |       |       |       |       |

**Lubricating Oil, Elements Wt.% (Nominal Value) listed below  
Designed for ASTM D-4628-97 & D-4927-96 & D-4951-96 & D-6443-99**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ca       | Cl    | Cu    | Mg    | P     | S     | Zn    |
| FX    | OC-A0050-1  | lubricating oil | only as set | 100ml  | %    | 0,300    | 0,080 | 0,030 | 0,060 | 0,060 | 0,275 | 0,060 |
| FX    | OC-A0050-2  | lubricating oil | only as set | 100ml  | %    | 0,250    | 0,100 | 0,000 | 0,010 | 0,150 | 0,000 | 0,150 |
| FX    | OC-A0050-3  | lubricating oil | only as set | 100ml  | %    | 0,500    | 0,000 | 0,035 | 0,160 | 0,150 | 0,000 | 0,020 |
| FX    | OC-A0050-4  | lubricating oil | only as set | 100ml  | %    | 0,350    | 0,010 | 0,000 | 0,120 | 0,080 | 0,200 | 0,000 |
| FX    | OC-A0050-5  | lubricating oil | only as set | 100ml  | %    | 0,110    | 0,000 | 0,015 | 0,100 | 0,100 | 0,300 | 0,050 |
| FX    | OC-A0050-6  | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,100 | 0,000 | 0,200 | 0,050 | 0,250 | 0,150 |
| FX    | OC-A0050-7  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,050 | 0,025 | 0,000 | 0,000 | 0,450 | 0,020 |
| FX    | OC-A0050-8  | lubricating oil | only as set | 100ml  | %    | 0,150    | 0,030 | 0,000 | 0,100 | 0,030 | 0,400 | 0,040 |
| FX    | OC-A0050-9  | lubricating oil | only as set | 100ml  | %    | 0,250    | 0,150 | 0,010 | 0,160 | 0,000 | 0,350 | 0,080 |
| FX    | OC-A0050-10 | lubricating oil | only as set | 100ml  | %    | 0,110    | 0,150 | 0,040 | 0,005 | 0,030 | 0,750 | 0,150 |
| FX    | OC-A0050-11 | lubricating oil | only as set | 100ml  | %    | 0,260    | 0,050 | 0,000 | 0,000 | 0,000 | 0,750 | 0,000 |
| FX    | OC-A0050-12 | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,000 | 0,005 | 0,140 | 0,080 | 0,500 | 0,080 |
| FX    | OC-A0050-13 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,005 | 0,020 | 0,020 | 0,200 | 0,020 |
| FX    | OC-A0050-14 | lubricating oil | only as set | 100ml  | %    | 0,070    | 0,150 | 0,020 | 0,080 | 0,140 | 0,650 | 0,150 |
| FX    | OC-A0050-15 | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,000 | 0,000 | 0,000 | 0,150 | 0,000 | 0,000 |
| FX    | OC-A0050-16 | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,000 | 0,001 | 0,080 | 0,000 | 0,500 | 0,020 |
| FX    | OC-A0050-17 | lubricating oil | only as set | 100ml  | %    | 0,180    | 0,020 | 0,020 | 0,000 | 0,020 | 0,600 | 0,060 |
| FX    | OC-A0050-18 | lubricating oil | only as set | 100ml  | %    | 0,400    | 0,010 | 0,001 | 0,010 | 0,020 | 0,000 | 0,000 |
| FX    | OC-A0050-19 | lubricating oil | only as set | 100ml  | %    | 0,010    | 0,020 | 0,040 | 0,010 | 0,020 | 0,200 | 0,100 |
| FX    | OC-A0050-20 | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,005 | 0,050 | 0,000 | 0,008 | 0,000 | 0,120 |
| FX    | OC-A0050-21 | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,050 | 0,020 | 0,080 | 0,050 | 0,275 | 0,050 |
| FX    | OC-A0050-22 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0050-23 | lubricating oil | Set 22x     |        |      |          |       |       |       |       |       |       |

**Lubricating Oil, Elements Wt.% (Nominal Value) listed below  
Designed for ASTM D-4628-97 & D-4927-96 & D-4951-96 & D-6443-99**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |       |       |       |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|-------|-------|-------|-------|-------|
|       |             |                 |             |        |      | Ba       | Ca    | Cl    | Cu    | Mg    | P     | S     | Zn    |
| FX    | OC-A0051-1  | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,300 | 0,080 | 0,030 | 0,060 | 0,060 | 0,275 | 0,060 |
| FX    | OC-A0051-2  | lubricating oil | only as set | 100ml  | %    | 0,175    | 0,250 | 0,100 | 0,000 | 0,010 | 0,150 | 0,000 | 0,150 |
| FX    | OC-A0051-3  | lubricating oil | only as set | 100ml  | %    | 0,040    | 0,500 | 0,000 | 0,035 | 0,160 | 0,150 | 0,000 | 0,020 |
| FX    | OC-A0051-4  | lubricating oil | only as set | 100ml  | %    | 0,020    | 0,350 | 0,010 | 0,000 | 0,120 | 0,080 | 0,200 | 0,000 |
| FX    | OC-A0051-5  | lubricating oil | only as set | 100ml  | %    | 0,150    | 0,110 | 0,000 | 0,015 | 0,100 | 0,100 | 0,300 | 0,050 |
| FX    | OC-A0051-6  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,200 | 0,100 | 0,000 | 0,200 | 0,050 | 0,250 | 0,150 |
| FX    | OC-A0051-7  | lubricating oil | only as set | 100ml  | %    | 0,200    | 0,000 | 0,050 | 0,025 | 0,000 | 0,000 | 0,450 | 0,020 |
| FX    | OC-A0051-8  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,150 | 0,030 | 0,000 | 0,100 | 0,030 | 0,400 | 0,040 |
| FX    | OC-A0051-9  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,250 | 0,150 | 0,010 | 0,160 | 0,000 | 0,350 | 0,080 |
| FX    | OC-A0051-10 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,110 | 0,150 | 0,040 | 0,005 | 0,030 | 0,750 | 0,150 |
| FX    | OC-A0051-11 | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,260 | 0,050 | 0,000 | 0,000 | 0,000 | 0,750 | 0,000 |
| FX    | OC-A0051-12 | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,200 | 0,000 | 0,005 | 0,140 | 0,080 | 0,500 | 0,080 |
| FX    | OC-A0051-13 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,005 | 0,020 | 0,020 | 0,200 | 0,020 |
| FX    | OC-A0051-14 | lubricating oil | only as set | 100ml  | %    | 0,080    | 0,070 | 0,150 | 0,020 | 0,080 | 0,140 | 0,650 | 0,150 |
| FX    | OC-A0051-15 | lubricating oil | only as set | 100ml  | %    | 0,010    | 0,050 | 0,000 | 0,000 | 0,000 | 0,150 | 0,000 | 0,000 |
| FX    | OC-A0051-16 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,400 | 0,000 | 0,001 | 0,080 | 0,000 | 0,500 | 0,020 |
| FX    | OC-A0051-17 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,180 | 0,020 | 0,020 | 0,000 | 0,020 | 0,600 | 0,060 |
| FX    | OC-A0051-18 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,400 | 0,010 | 0,001 | 0,010 | 0,020 | 0,000 | 0,000 |
| FX    | OC-A0051-19 | lubricating oil | only as set | 100ml  | %    | 0,150    | 0,010 | 0,020 | 0,040 | 0,010 | 0,020 | 0,200 | 0,100 |
| FX    | OC-A0051-20 | lubricating oil | only as set | 100ml  | %    | 0,005    | 0,050 | 0,005 | 0,050 | 0,000 | 0,008 | 0,000 | 0,120 |
| FX    | OC-A0051-21 | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,200 | 0,050 | 0,020 | 0,080 | 0,050 | 0,275 | 0,050 |
| FX    | OC-A0051-22 | lubricating oil | only as set | 100ml  | %    | 0,120    | 0,200 | 0,000 | 0,000 | 0,000 | 0,000 | 0,750 | 0,000 |
| FX    | OC-A0051-23 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0051-24 | lubricating oil | Set 23x     |        |      |          |       |       |       |       |       |       |       |

**Metal Working Fluid Wt.% (Nominal Value) listed below**

| Inst. | Part#       | Appl.           | Rem.        | Amount | Unit | Elements |       |       |
|-------|-------------|-----------------|-------------|--------|------|----------|-------|-------|
|       |             |                 |             |        |      | Cl       | P     | S     |
| FX    | OC-A0052-1  | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,000 | 0,000 |
| FX    | OC-A0052-2  | lubricating oil | only as set | 100ml  | %    | 0,750    | 0,025 | 0,500 |
| FX    | OC-A0052-3  | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,100 | 3,000 |
| FX    | OC-A0052-4  | lubricating oil | only as set | 100ml  | %    | 1,000    | 0,500 | 2,500 |
| FX    | OC-A0052-5  | lubricating oil | only as set | 100ml  | %    | 0,100    | 0,005 | 2,000 |
| FX    | OC-A0052-6  | lubricating oil | only as set | 100ml  | %    | 1,500    | 0,200 | 1,000 |
| FX    | OC-A0052-7  | lubricating oil | only as set | 100ml  | %    | 2,000    | 0,005 | 3,000 |
| FX    | OC-A0052-8  | lubricating oil | only as set | 100ml  | %    | 1,000    | 0,050 | 0,100 |
| FX    | OC-A0052-9  | lubricating oil | only as set | 100ml  | %    | 0,500    | 0,400 | 0,000 |
| FX    | OC-A0052-10 | lubricating oil | only as set | 100ml  | %    | 2,000    | 0,200 | 1,500 |
| FX    | OC-A0052-11 | lubricating oil | only as set | 100ml  | %    | 0,000    | 0,500 | 1,500 |
| FX    | OC-A0052-12 | lubricating oil | only as set | 100ml  | %    | 1,250    | 0,010 | 0,050 |
| FX    | OC-A0052-13 | lubricating oil | only as set | 100ml  | %    | 0,050    | 0,300 | 0,050 |
| FX    | OC-A0052-14 | lubricating oil | Set 13x     |        |      |          |       |       |

**Lubricating Oil, Elements Wt.% (Nominal Value) listed below**

| Inst. | Part#       | Appl.           | Rem.    | Amount | Unit | Elements |       |       |       |
|-------|-------------|-----------------|---------|--------|------|----------|-------|-------|-------|
|       |             |                 |         |        |      | Ca       | P     | S     | Zn    |
| FX    | OC-A0053-1  | lubricating oil | xrf     | 118ml  | %    | 0,000    | 0,000 | 0,000 | 0,000 |
| FX    | OC-A0053-2  | lubricating oil | xrf     | 118ml  | %    | 0,000    | 0,020 | 0,300 | 0,175 |
| FX    | OC-A0053-3  | lubricating oil | xrf     | 118ml  | %    | 0,005    | 0,000 | 0,550 | 0,140 |
| FX    | OC-A0053-4  | lubricating oil | xrf     | 118ml  | %    | 0,025    | 0,175 | 0,350 | 0,100 |
| FX    | OC-A0053-5  | lubricating oil | xrf     | 118ml  | %    | 0,050    | 0,150 | 0,200 | 0,200 |
| FX    | OC-A0053-6  | lubricating oil | xrf     | 118ml  | %    | 0,075    | 0,225 | 0,500 | 0,150 |
| FX    | OC-A0053-7  | lubricating oil | xrf     | 118ml  | %    | 0,100    | 0,010 | 0,450 | 0,250 |
| FX    | OC-A0053-8  | lubricating oil | xrf     | 118ml  | %    | 0,100    | 0,125 | 0,600 | 0,060 |
| FX    | OC-A0053-9  | lubricating oil | xrf     | 118ml  | %    | 0,150    | 0,100 | 0,250 | 0,089 |
| FX    | OC-A0053-10 | lubricating oil | xrf     | 118ml  | %    | 0,200    | 0,008 | 0,075 | 0,120 |
| FX    | OC-A0053-11 | lubricating oil | xrf     | 118ml  | %    | 0,250    | 0,050 | 0,125 | 0,000 |
| FX    | OC-A0053-12 | lubricating oil | xrf     | 118ml  | %    | 0,300    | 0,060 | 0,100 | 0,130 |
| FX    | OC-A0053-13 | lubricating oil | xrf     | 118ml  | %    | 0,350    | 0,004 | 0,400 | 0,110 |
| FX    | OC-A0053-14 | lubricating oil | xrf     | 118ml  | %    | 0,400    | 0,200 | 0,175 | 0,050 |
| FX    | OC-A0053-15 | lubricating oil | xrf     | 118ml  | %    | 0,500    | 0,030 | 0,150 | 0,070 |
| FX    | OC-A0053-16 | lubricating oil | xrf     | 118ml  | %    | 0,600    | 0,005 | 0,050 | 0,080 |
| FX    | OC-A0053-17 | lubricating oil | Set 16x |        |      |          |       |       |       |