

## SPARE PARTS LIST

### SPIROMATIC 90 USA/USA-S REGULATOR UNIT





# READ BEFORE USE

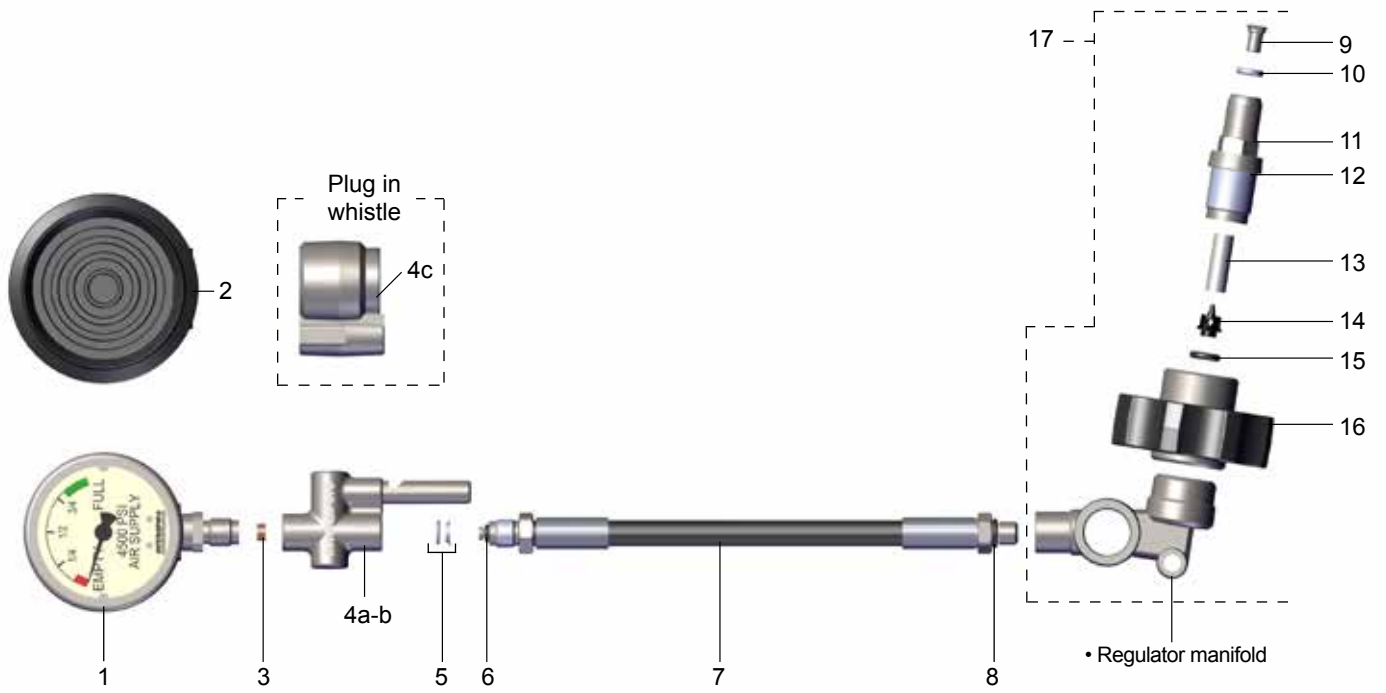
1. Only holders of a valid **INTERSPIRO SERVICE CERTIFICATE** may carry out service and repairs on **INTERSPIRO** breathing equipment. Unauthorized service may result in malfunction and users relying there on could sustain severe respiratory injury or death.
2. When using the spare part list always refer to the equipment's **SERVICE MANUAL** in regard to procedure and handling of the spare parts assembly and function.
3. Changes to this document – necessitated by typographical errors, inaccuracies of current information or improvements and changes of equipment – may be done at any time and without prior notice.
4. The **NOTE** column is used for short descriptions of the spare part, for example dimensions or number of included sub components. For example "10 x 336 100 437" indicates that this is a multi-pack that consists of 10 pieces of the single component 336 100 437.
5. The service kits contain replacement items used for preventive maintenance.
6. Always refer to **WWW.INTERSPIRO.COM** for product or document updates and for service bulletins.



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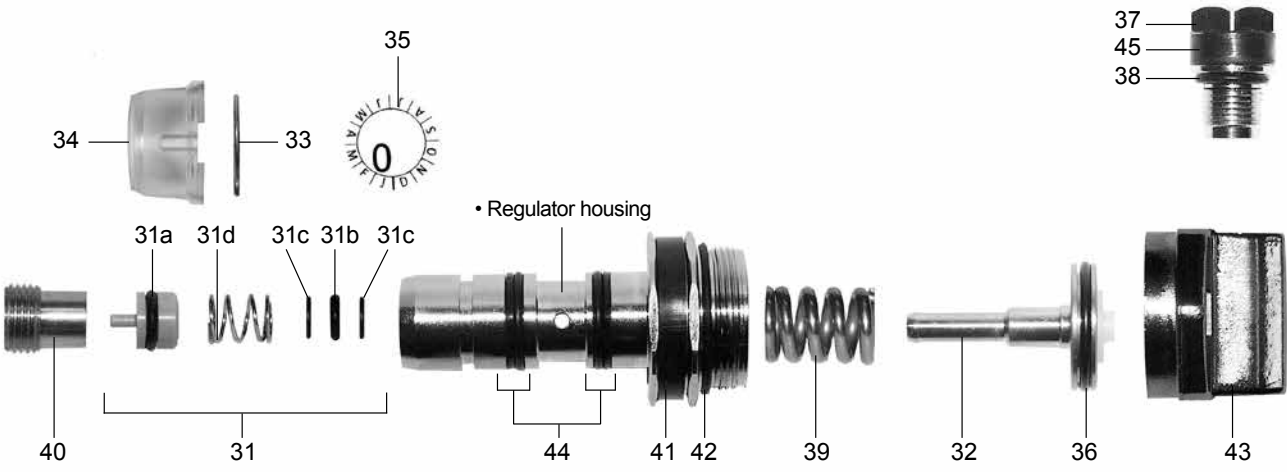
# MANIFOLD UNIT



| #   | ORDER NO.   | DESCRIPTION                   | NOTE   |
|-----|-------------|-------------------------------|--|
| 1a  | 460 200 084 | Pressure gauge, 4500 psi      | 4500 psi   |
| 1b  | 460 200 085 | Pressure gauge, 2216 psi      | 2216 psi   |
| 2   | 30 984-51   | Pressure gauge cover          |  |
| 3   | 336 190 159 | Gasket set                    | 2 sizes  |
| 4a  | 31 030-57   | Whistle, 4500 psi             |  |
| 4b  | 31 030-58   | Whistle, 2216 psi             |  |
| 4c  | 95 905-51   | Whistle manifold              | 10 x 336 900 105   |
| 5   | 460 190 192 | Friction washer kit           | 5 x 31 795-01, 5 x 31 796-01, 5 x 944 610 201 (#6)               |
| 6   | 336 190 235 | O-ring                        | 10 x 944 610 201   |
| 7   | 460 190 380 | High pressure hose            | Incl. #5, #6 & #8  |
| 8   | 336 190 312 | O-ring                        | 10 x 336 900 105   |
| 9   | 460 190 060 | Nipple tip and O-ring         | 10 x 336 100 656, 10 x 336 900 182                               |
| 10  | 336 190 437 | O-ring                        | 10 x 336 900 182   |
| 11a | 460 200 090 | Connection nipple, 4500 psi   | 1 x 336 100 652  |
| 11b | 460 200 091 | Connection nipple, 2216 psi   | 1 x 336 100 655  |
| 12  | 96 944-51   | Connector washer              | 10 x 96 944-01   |
| 13a | 346 190 643 | Inlet filter                  | 10 x 212 100 014   |
| 13b | 346 190 644 | Inlet filter                  | 100 x 212 100 014  |
| 14  | 460 190 059 | Filter holder kit             | 10 x 336 100 653, 10 x 212 100 014 (#13), 10 x 336 900 183 (#15) |
| 15  | 336 890 105 | O-ring                        | 10 x 336 900 183   |
| 16a | 460 200 088 | Handwheel connector, 4500 psi | 1 x 336 190 432  |
| 16b | 460 200 089 | Handwheel connector, 2216 psi | 1 x 336 190 433  |
| 17a | 336 890 438 | Manifold assembly, 4500 psi   |  |
| 17b | 336 890 444 | Manifold assembly, 2216 psi   |  |

| # | ORDER NO.   | DESCRIPTION                                 | NOTE                           |
|---|-------------|---|--------------------------------|
| A | 460 200 082 | <b>Service kit</b> for 1 cylinder connector | 1 x #10, #12, #13, #15         |
| B | 460 200 100 | <b>Service kit</b> for Manifold             | 1 x #5, #6, #10, #12, #13, #15 |

# PRESSURE REGULATOR

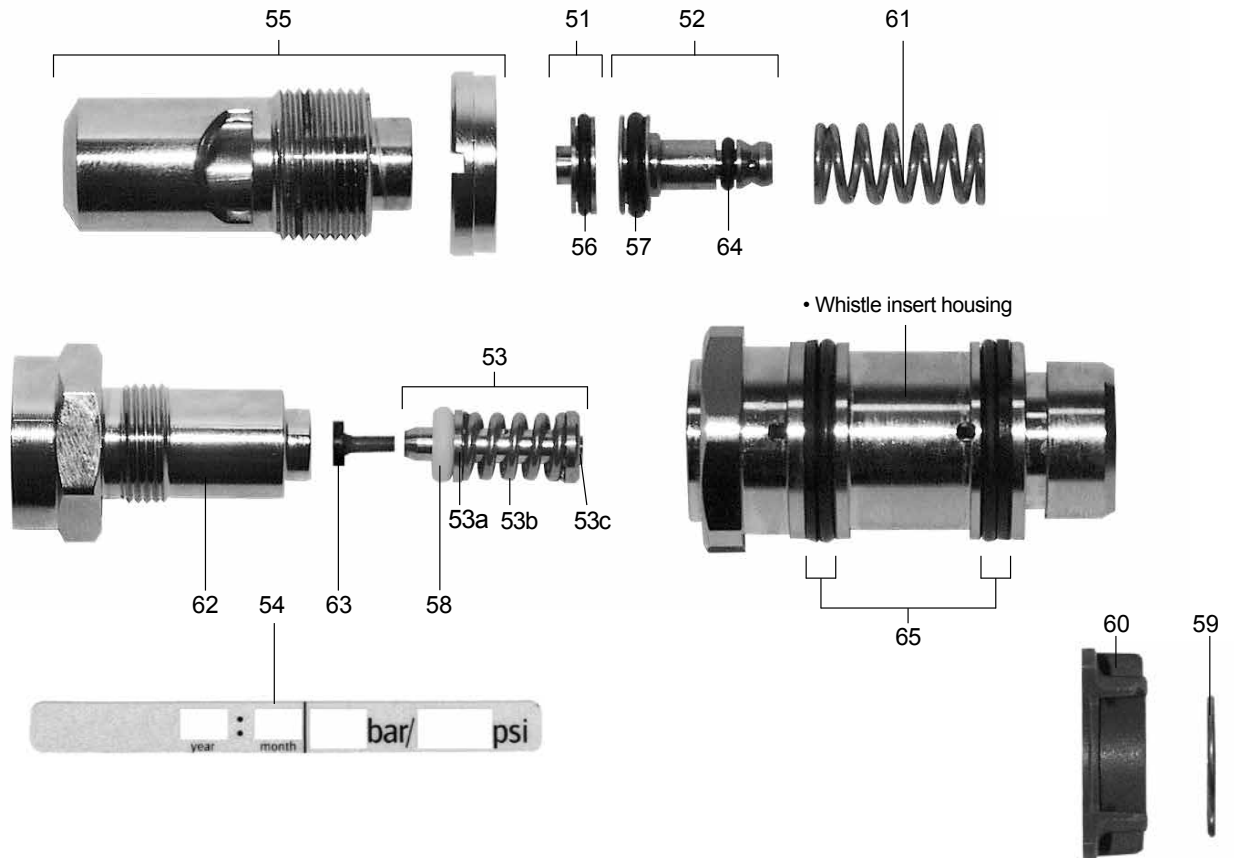




| #   | ORDER NO.   | DESCRIPTION                           | NOTE                             |
|-----|-------------|---------------------------------------|----------------------------------|
| •   | 460 190 141 | Pressure regulator                    | Not incl. #33-34                 |
| •   | 346 190 649 | Pressure regulator, for the CE market | Not incl. #33-34                 |
| 31  | 346 190 023 | Valve seat set                        |                                  |
| 32  | 460 190 386 | Piston                                |                                  |
| 33  | 346 190 293 | Locking clip                          | 10 x 346 190 158                 |
| 34  | 346 190 294 | Protective cover                      | 10 x 346 190 159                 |
| 35  | 346 190 295 | Sealing lable                         | 25 x 346 100 170                 |
| 36  | 346 190 022 | O-ring                                | 10 x 346 900 002                 |
| 37  | 460 190 387 | Relief valve BSP 1/8"                 | Incl. #38                        |
| 38  | 336 190 311 | O-ring                                | 10 x 944 610 206                 |
| 39  | 346 190 026 | Spring                                | 5 x 346 100 005                  |
| 40  | 460 190 388 | Adjusting screw                       | 5 x 346 100 009                  |
| 41  | 460 190 201 | Protective band                       | 5 x 95 472                       |
| 42  | 346 190 024 | O-ring                                | 10 x 346 900 004                 |
| 43  | 460 190 389 | Regulator cover                       | 2-port                           |
| 44a | 460 190 198 | O-ring and back-up rings              | 10 x 346 900 001, 10 x 95 471-01 |
| 44b | 460 190 199 | O-ring and back-up rings              | 50 x 346 900 001, 50 x 95 471-01 |
| 45  | 346 190 053 | Protective band                       | 10 x 346 100 066                 |

| # | ORDER NO.   | DESCRIPTION                                 | NOTE   |
|---|-------------|---|--|
| A | 460 190 322 | <b>Service kit</b> for 1 Pressure regulator | 1 x #31, 1 x #33-36, 1 x #38, 1 x #41, 1 x #42, 1 x #45, 2 x #44 |

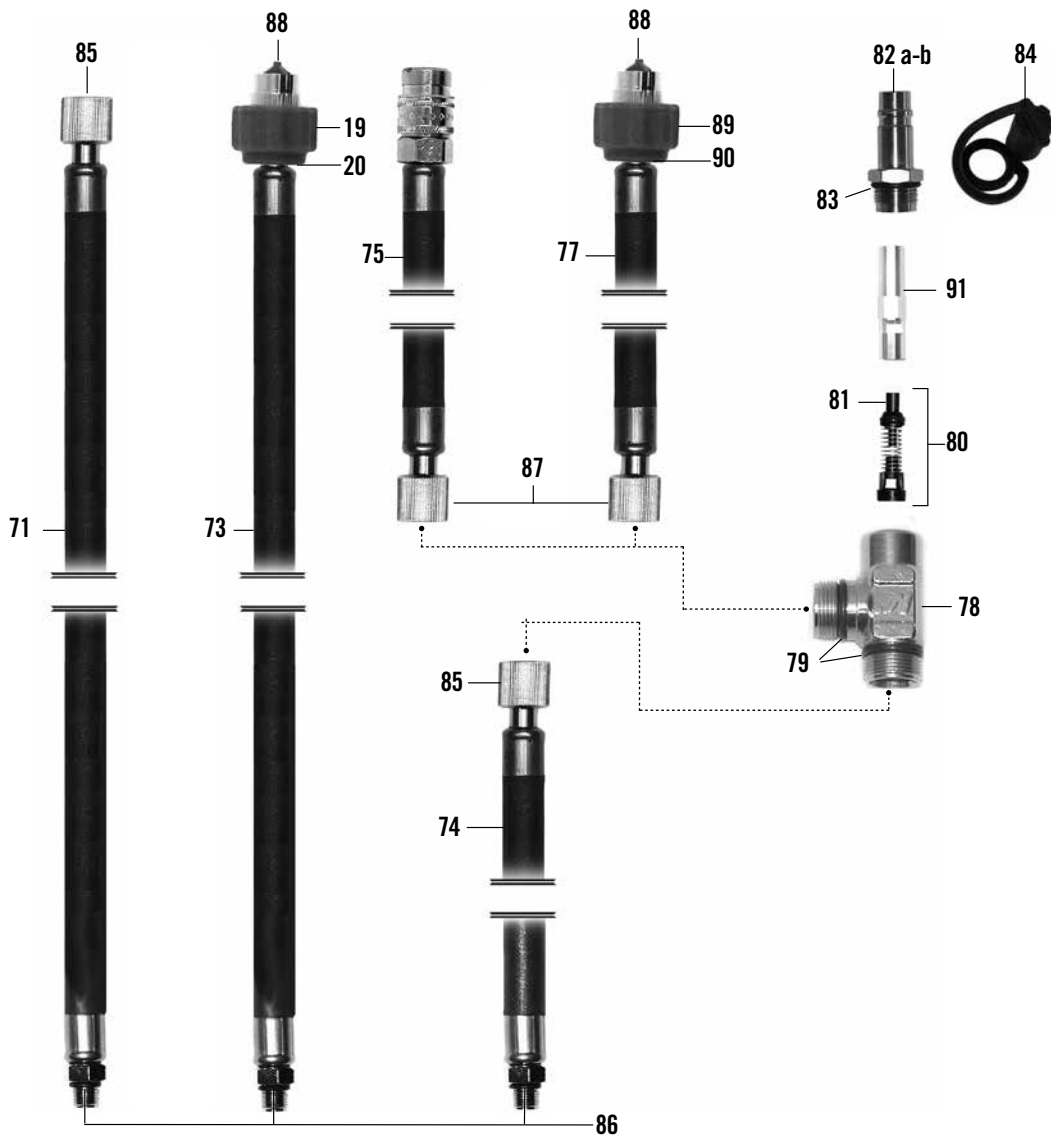
# WHISTLE INSERT (PLUG IN WHISTLE)



| #  | ORDER NO.   | DESCRIPTION              | NOTE                             |
|----|-------------|--------------------------|----------------------------------|
| •  | 460 190 409 | Whistle insert 4500 psi  | 74-78 bar Not incl. #59-60       |
| •  | 460 190 410 | Whistle insert 2216 psi  | 36-41 bar Not incl. #59-60       |
| 51 | 346 190 220 | Nozzle with O-ring       | Incl. #56                        |
| 52 | 346 190 219 | Regulating piston assy   | Incl. #57 & 64                   |
| 53 | 346 190 216 | Piston assembly          | Incl. #58                        |
| 54 | 346 190 296 | Sealing label            | 20 x 97 081-01                   |
| 55 | 346 190 221 | Whistle Assy             |                                  |
| 56 | 346 190 251 | O-ring                   | 10 x 346 900 016                 |
| 57 | 346 190 249 | O-ring                   | 10 x 346 900 014                 |
| 58 | 336 190 240 | O-ring                   | 5 x 331 100 562                  |
| 59 | 346 190 293 | Locking clip             | 10 x 346 100 158                 |
| 60 | 460 190 299 | Retaining ring           | 10 x 346 100 208                 |
| 61 | 346 190 218 | Spring                   | 5 x 346 100 082                  |
| 62 | 346 190 248 | Whistle cylinder         |                                  |
| 63 | 346 190 217 | Sealing cone             | 10 x 346 100 081                 |
| 64 | 460 190 269 | O-ring                   | 10 x 346 900 015                 |
| 65 | 460 190 200 | O-ring and back-up rings | 10 x 346 900 017, 10 x 95 473-01 |

| # | ORDER NO.   | DESCRIPTION                                      | NOTE   |
|---|-------------|--|--|
| A | 460 190 323 | <b>Service kit</b> for 1 Whistle insert assembly | 1 x #54, 1 x #56-60, 1 x #63, 1 x #64, 2 x #65 |

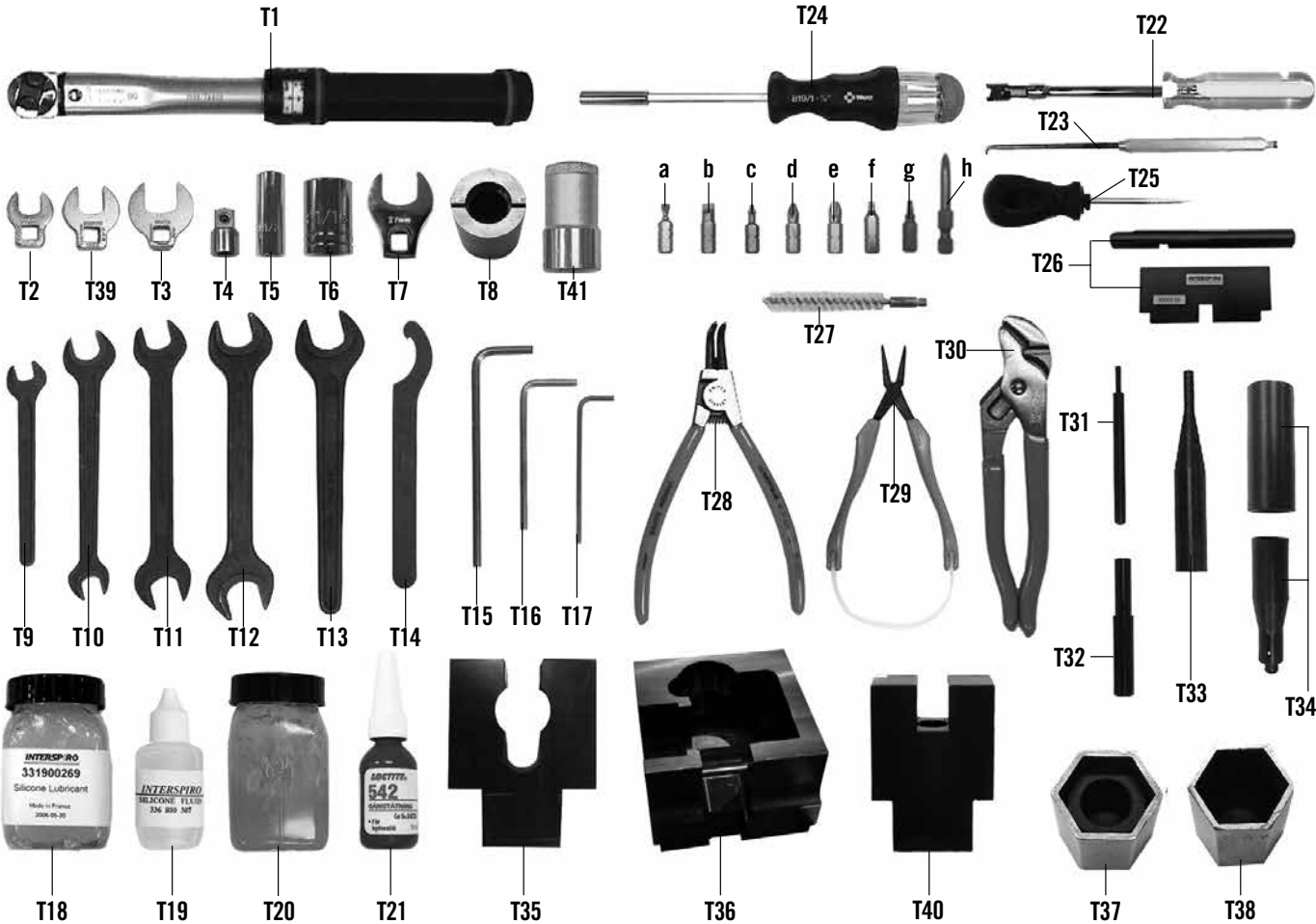
# MEDIUM PRESSURE HOSES



| #   | ORDER NO.   | DESCRIPTION          | NOTE             |
|-----|-------------|----------------------|------------------|
| 71  | 460 190 360 | Breathing hose 1.35m |                  |
| 73  | 460 200 003 | Breathing hose 1.35m |                  |
| 74  | 460 190 363 | Breathing hose 0.82m |                  |
| 75  | 460 200 004 | Breathing hose 0.50m |                  |
| 77  | 460 200 005 | Breathing hose 0.55m |                  |
| 78  | 460 190 264 | T-Manifold           |                  |
| 79  | 336 190 228 | O-ring               | 10 x 336 900 007 |
| 80  | 346 190 223 | Non-return valve     |                  |
| 81  | 460 190 369 | Cone with O-ring     |                  |
| 82a | 96 531-51   | Male Quick coupling  | IS               |
| 82b | 460 190 370 | Male Quick coupling  | EUR              |
| 83  | 346 190 069 | O-ring               | 10 x 944 610 210 |
| 85  | 336 190 237 | O-ring               | 10 x 336 900 099 |
| 86  | 336 190 311 | O-ring               | 10 x 944 610 206 |
| 87  | 336 190 236 | O-ring               | 10 x 944 610 205 |
| 88a | 460 200 006 | Valve lifter         | Incl. #88b       |
| 88b | 336 190 438 | O-ring               | 10 x 336 900 023 |
| 89  | 460 200 007 | Bypass knob          | 5 x 336 800 030  |
| 90  | 336 800 031 | Stop ring            |                  |
| 91  | 460 190 371 | Valve Tube           | EURO only        |

| # | ORDER NO.   | DESCRIPTION                           | NOTE                      |
|---|-------------|---------------------------------------|---------------------------|
| A | 460 190 414 | <b>Service kit</b> for 3-way manifold | 2 x #79, 1 x #81, 2 x #83 |

# TOOLS



| #   | ORDER NO.   | DESCRIPTION                      | NOTE |
|-----|-------------|----------------------------------|------|
| •   | 96 018-02   | Tool kit                         |      |
| T1  | 336 190 478 | Torque wrench                    |      |
| T2  | 95 998-5113 | Crowfoot wrench 13 mm            |      |
| T3  | 95 998-5120 | Crowfoot wrench 20 mm            |      |
| T4  | 31 646-51   | Torque wrench adapter            |      |
| T5  | 460 200 096 | Socket 1/2", connection nipple   |      |
| T6  | 96 003-51   | Socket 11/16"                    |      |
| T7  | 95 998-5127 | Crowfoot wrench, thin, 27 mm     |      |
| T8  | 460 190 849 | Socket, whistle                  |      |
| T9  | 460 200 516 | U-spanner 8 mm                   |      |
| T10 | 460 190 774 | U-spanner 10-13 mm               |      |
| T11 | 460 190 769 | U-spanner 14-15 mm               |      |
| T12 | 460 190 775 | U-spanner 18-19 mm               |      |
| T13 | 460 200 010 | U-spanner 20 mm                  |      |
| T14 | 95 992-51   | BV nut spanner wrench            |      |
| T15 | 460 200 008 | Hexagon key 5 mm                 |      |
| T16 | 460 200 095 | Hexagon key 1/8"                 |      |
| T17 | 460 190 771 | Hexagon key 2.5 mm               |      |
| T18 | 331 900 269 | Lubricant                        |      |
| T19 | 336 800 307 | Silicone fluid                   |      |
| T20 | 331 900 268 | Lubricant                        |      |
| T21 | 460 190 846 | Locking compound                 |      |
| T22 | 460 200 097 | Stem nut driver, cyl. valve      |      |
| T23 | 95 999-01   | Seal hook                        |      |
| T24 | 32 233-51   | Screwdriver with bit kit         |      |
| a-h | 32 235-51   | Screwdriver bit kit              |      |
| a   | -           | Slotted bit 3/16"                |      |
| b   | -           | Slotted bit 1/4"                 |      |
| c   | -           | Phillips bit #1                  |      |
| d   | -           | Phillips bit #2                  |      |
| e   | -           | Phillips bit #3                  |      |
| f   | -           | Square bit #2                    |      |
| g   | -           | Torx bit, T-10                   |      |
| h   | -           | Pozidrive bit, #1                |      |
| T25 | 460 190 768 | Awl                              |      |
| T26 | 30 001-01   | Tool for breathing valve         |      |
| T27 | 460 200 030 | Barrel brush                     |      |
| T28 | 460 200 519 | Circlip pliers                   |      |
| T29 | 460 190 772 | Long nosed pliers                |      |
| T30 | 96 984-51   | Channel lock pliers              |      |
| T31 | 460 190 565 | Punch for piston, O-ring, washer |      |
| T32 | 460 190 566 | Punch for O-ring, support washer |      |
| T33 | 95 925-01   | Assy. tool, reg. o-rings         |      |
| T34 | 95 926-01   | Assy. tool, whistle o-rings      |      |
| T35 | 95 928-01   | Fixture, whistle manifold        |      |
| T36 | 32 231-51   | Fixture, regulator manifold      |      |
| T37 | 460 190 847 | Fixture for Plug-in regulator    |      |
| T38 | 460 190 848 | Fixture for Plug-in whistle      |      |
| T39 | 95 998-5115 | Crowfoot wrench 15 mm            |      |
| T40 | 31 924-51   | Fixture for whistle              |      |
| T41 | 460 200 029 | Long socket, 15 mm               |      |

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