

Needle Types, for B 16 & B 18 engines

October 1969

| Engine | Air filter type | Needle ID | Part No. | Carburetor type |
|----------------|---|-------------|---------------------|------------------------------|
| B 16 B | Paper | GT | 237009 | SU - H4 |
| B 16 B | Oil | GW | 237050 | SU - H4 |
| B 18 A | Paper | "4F" | 237252 | Zenith-Stromberg 175-CDS2 |
| B 18 B (100HP) | Paper | TZ | 237103 | SU - HS6 |
| B 18 B (108HP) | Paper | ZH | 237221 | SU - HS6 |
| B 18 B (115HP) | Paper | KD | 237248 | SU - HS6 |
| B 18 B (115HP) | Paper <i>silencing air filter</i> | KF | 237255 | SU - HS6 |
| B 18 B (115HP) | Paper <i>with exhaust emission control</i> | DX | 237315 | SU - HS6 |
| B 18 D (90HP) | Paper | KA or ZH | 237145 or 237221 | SU - HS6 |
| B 18 D (90HP) | Oil <i>silencing air filter</i> | KB | 237183 | SU - HS6 |
| B 18 D (95HP) | Paper | ZH | 237221 | SU - HS6 |
| B 18 D (95HP) | Paper | KE | 237249 | SU - HS6 |
| B 18 D (100HP) | Paper | SM | 237267 | SU - HS6 |
| B 18 D (100HP) | Paper <i>silencing air filter</i> | KG | 237262 | SU - HS6 |

Needle Types, for B 20 and B 30 engines

October 1970

| Engine | Carburetor | Needle Types | | | | | |
|--------|------------|----------------|----------|----------------|----------|----------------|----------|
| | | 1969 car model | | 1970 car model | | 1971 car model | |
| | | Needle ID | Part No. | Needle ID | Part No. | Needle ID | Part No. |
| B 20 A | Stromberg | B2AF * | 237346 | B1AN | 237441 | B1AN | 237441 |
| B 20 A | SU - HS6 | – | – | BAH | 237452 | – | – |
| B 20 B | Stromberg | B1 S * | 237350 | B1AP | 237442 | B1AP | 237442 |
| B 20 B | SU - HS 6 | KN * | 237353 | KN * | 237353 | – | – |
| B 20 B | SU - HIF6 | – | – | – | – | BAL | 237536 |
| B 20 D | SU - HIF6 | – | – | – | – | BAL | 237536 |
| B 30 A | Stromberg | B1 R * | 237344 | B1AM | 237443 | B1 BE | 237482 |

* the needle should have the spring load direction towards the carburetor throttle.

SU Needles

Needle sizes, dimensions in 10000th of an inch (990 = 0.0990")

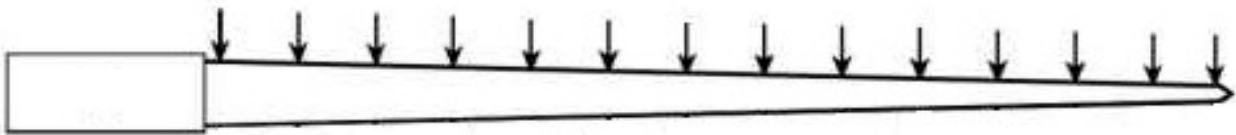
Dimensions indicated are given at reference points on the needles (see picture below)

Green color indicates largest size (lowest fuel flow) for a given engine type.

Red color indicates smallest size (highest fuel flow) for a given engine type.

B18 engines

| | | Idle | | Acceleration & cruise | | | | Top speed | | | | | | | |
|------|----|------|-----|-----------------------|-----|-----|-----|-----------|-----|-----|-----|-----|-----|-----|-----|
| B16A | GT | 890 | 850 | 820 | 795 | 770 | 745 | 710 | 675 | 640 | 605 | 570 | 535 | 500 | |
| | GW | 890 | 850 | 830 | 800 | 775 | 760 | 745 | 730 | 715 | 700 | 685 | 670 | 660 | |
| B18B | TZ | 990 | 950 | 915 | 893 | 870 | 847 | 827 | 805 | 787 | 770 | 753 | 737 | 710 | 690 |
| | ZH | 990 | 950 | 915 | 893 | 870 | 847 | 820 | 795 | 775 | 755 | 735 | 715 | 695 | 675 |
| | KD | 990 | 950 | 908 | 883 | 856 | 830 | 775 | 740 | 705 | 670 | 635 | 600 | 565 | 530 |
| | KF | 990 | 950 | 910 | 890 | 875 | 855 | 835 | 820 | 810 | 800 | 795 | 790 | 790 | 790 |
| | DX | 990 | 958 | 926 | 888 | 859 | 830 | 775 | 740 | 705 | 670 | 635 | 600 | 565 | 530 |
| B18D | KA | 990 | 950 | 920 | 895 | 876 | 855 | 835 | 814 | 793 | 784 | 780 | 780 | 780 | 780 |
| | ZH | 990 | 950 | 915 | 893 | 870 | 847 | 820 | 795 | 775 | 755 | 735 | 715 | 695 | 675 |
| | KB | 990 | 950 | 917 | 900 | 886 | 872 | 860 | 850 | 845 | 840 | 835 | 830 | 825 | |
| | KE | 990 | 950 | 917 | 900 | 885 | 870 | 848 | 838 | 830 | 822 | 815 | 808 | 800 | 792 |
| | SM | 990 | 950 | 915 | 885 | 865 | 845 | 835 | 820 | 800 | 780 | 765 | 750 | 740 | 730 |
| | KG | 990 | 950 | 915 | 895 | 875 | 855 | 841 | 834 | 827 | 820 | 810 | 800 | 790 | 780 |



B20 engines

| | | | | | | | | | | | | | | | | | |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| B20A | BAH | 995 | 967 | 939 | 909 | 881 | 848 | 781 | 740 | 703 | 677 | 661 | 649 | 636 | 624 | 618 | 618 |
| B20B | KN | 990 | 962 | 933 | 905 | 870 | 820 | 782 | 747 | 718 | 690 | 660 | 630 | 600 | 570 | 540 | 510 |
| B20B/D | BAL | 972 | 957 | 926 | 898 | 870 | 826 | 787 | 752 | 727 | 703 | 678 | 653 | 629 | 605 | 580 | 555 |

Reference:

Volvo material from 1969-1970

Haynes SU Carburetors Owners Workshop Manual

Compiled by: Tadek Malkiewicz