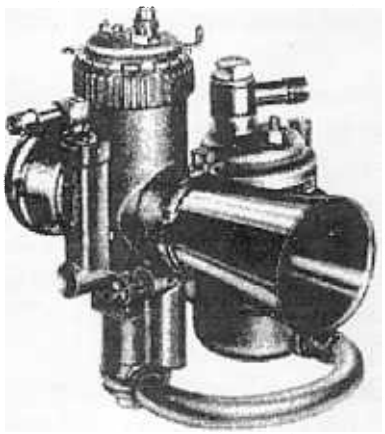
The following is a posting of the first, double-sided page of a SS Dell'orto Carburetor Technical Manual. The year of issue of this manual is unknown, as are the balance of the page(s) with table A, Fig. 1 and Fig. 2. All grammar/spelling errors remain to preserve authenticity. If you have the balance of this manual and would like to see it posted, please contact Moto Italia or The Digital Garage

INDUSTRIA NAZIONALE CARBURATORI **DELL'ORTO**
Seregno (Milano) Italy - Phone 2341-2342-2343

SERIES SS **DELL'ORTO** CARBURETORS
For Sport and Racing engines

Technical Data

Carburetor type	Choke adaptor diameter	Throttle valve diameter	Fitting	
			Clip	Flange
SSI-C	18 20-22-23	31	ø 25.4 ø 28.6	N/A
SS-A, SSI-A, SSF-A, SSFF-A	24 25-26-27 28-29-30	35	ø 28.6 ø 31.7 ø 35	F 50.8
SSI-B, SSFI-B	32	38	ø 36	F 50.8
SSI-B, SSFI-B	35	42	ø 39	F 55
SSI-B	36-38-40-42	48	ø 45	N/A



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GENERAL FEATURES

Construction in light alloy with anodic protection against the oxidation and hot spraying painting in silver-grey colour.
Clip and flange **Fittings**
Inserted **Choke Adaptor** at whole ring and carburation chamber with ininterrupted smooth cylindrical wall.
Throttle Valve in chromium plated special bronze to withstand wear.
Jet Needle with five positions of adjustment, acting in the needle jet.

Needle Jet in high strength special bronze.
Diffuser at great strength multiple elements.
Main Jet flooded in an emulsioning tube, placed under the mixing chamber.
Idle Device: in these carburetors, two are the idle different systems:

with **Interchangeable jet and air adjusting screw** fitted on carburetors where the engine needs a high operation sensibility at low speed;
with **variable pilot jet by screw and air fixed**, fitted on carburetors for racing engines, where these, according to their use, do not require a meticulous idle.

Mixture strength **Control** bearing additional air, which brakes the fuel delivery from the needle jet, letting so to enrich (by closing the air valve) the mixture strength if needed, without shutting the choke adaptor section.
Air tube with truncated cone shape in different lengths according to engine requirements.
Allowed fittings. The carburetors of the SS-A series can be fitted with a 15 degrees slant at the most (with throttle valve controlled both in vertical and horizontal plan).
On the contrary the carburetors of the series SS-I, for a special device, can be fitted with larger slants up to 90 degrees (downdraft).
Float Chamber. For the carburetors with choke adaptor from ø 18 to ø 30 mm. fitted on sport engines, stiff float chambers anchored to the carburetor directly are supplied. In this case it is necessary when ordering to point out the induction pipe slant, bearing in mind that 12-26-45 deqrees standard slanting float chambers can be supplied. For racing engines, where their vibrations are of great degree, two types of float chambers are supplied: type SS 1 (larger) for carburetor from ø 32 to ø 42 - type SS 2 (smaller) for carburetor from ø 18 to ø 30.
These float chcunbers have the fuel level at 35 mm. from their lip; when installing they must be fixed so that their level is at the same height of air valve channel center line, as shown on fig. 2.
Banjos for fuel take, single and twin, with the end suitable for direct assembly of rubber pipe and 1/4 gas threaded.

NECESSARY DATA FOR A SUITABLE CARBURETOR SUPPLY

1. Engine **Make** - displacement of each cylinder - 2 or 4 strokes - Number of cylinders.
2. Compression **Ratio** and fuel used.
3. Highest **Rpm** and corresponding power.
4. Inner **Diameter** of induction pipe tube. Induction valve diameter. Section size in mm.^{2} of induction ports - Transfer and exhaust (only for 2 stroke engines).
5. Carburetor connection **Type** to the head or to the cylinder (clip or flange fitting) and its sizes: outside diameter if clip fitting and stud bolt centers if flange fitting.
6. Eventual **Slant** to which the carburetor will be subjected.
7. If normal or remote **Float Chamber** wanted; top or bottom feed and banjo sizes for the connection to the fuel pipe.
8. **In case** of normal float chamber, it is necessary to state if right or left is wanted, stating it by looking the carburetor body from the air tube side.
9. **Air tube** wanted: if long or short one.

For the choice of the carburetor to set up on the different engines please see table A.

INSTRUCTIONS FOR TUNING

IDLE ADJUSTMENT (Throttle valve opening corresponding to the section **A - Fig. 1**)
It is necessary first of all to bear in mind that this adjustment must be established always when the engine has reached its normal running temperature.

> **In the first idle system,, where is subsisting the replacing jet and the air adjusting screw**, you must operate on this air screw in order to obtain a correct carburation, bearing in mind that by tightening it the mixture strength is enriching, while by unscrewing it the mixture strength is weakening.
> **In the second system, where is subsisting the variable screwed pilot jet and the fixed air**, the wished engine running will be obtained by operating only on the screw which adjusts the fuel passage; the mixture strength will weaken by tightening this screw and will enrich by unscrewing it.
> This second idle system, although it is not exact and sensitive like the first one (suitable to particular uses and engines as told in the general features) allows a better and quicker mixture strength change; it favours therefore easy corrections of carburation also in the passage runnings and necessary easy enrichments in case of alcohol feed.

With both the idle systems is always advisable to adjust the mixture strength at the slowest runnings, rather about the rich, in order to have then clean passages and pickups without hesitation.

FIRST PASSAGE ADJUSTMENT (Throttle valve opening corresponding to the section **B - Fig. 1**).
When obtained a satisfactory idle adjustment, one becomes to the choice of the suitable throttle valve for the intermediate runnings, proceeding as follows.

1. If opening gradually the throttle valve for a space corresponding to the part B - fig. 1 the engine running is normal, it means that the throttle valve is suitable.
2. If the engine is inclining to fall or it gives backfires for weaken mixture, it means that the fitted throttle valve has a cutaway too high and it is necessary to replace it with another one of lower size.
3. If the engine instead is emitting black smoke at the exhaust or it is giving irregular explosions with a heavy running, it means that the fitted throttle valve has a cutaway too low and it is necessary to replace it with another one of upper size.

JET NEEDLE ADJUSTMENT (Throttle valve opening corresponding to the section **C - Fig. 1**).
In order to have the possibility to adjust the jet needle there are on it 5 grooves or holes (the numeration is starting from the top as follows: 1-2-3-4-5). The jet needle checks the carburation for a throttle valve opening corresponding to the section C - Fig. 1.
If the mixture seems to be weak, the needle must be moved upwards one or two grooves so as to allow a larger flow of fuel at the exit of the needle jet.
If instead the mixture appears to be reach, the opposite must be done, by lowering the needle a few grooves (or holes where existing).
The average position of the jet needle is generally established by us at the third groove (or hole).

MAIN JET SIZE (Throttle valve opening corresponding to section **D - Fig. 1**).
The influence of the main jet is especially felt in the throttle valve opening corresponding to section D - Fig. 1.
It is therefore in this field that it is necessary to operate in order to establish if the main jet fitted is the

most suitable one, and precisely:

1. If fully opening the gas, the engine begins to turn over with difficulty and instead of increasing in speed,it does not change or even loses and tends to backfire, and if by closing the mixture control piston, a distinct improvement in running is noted, this indicates that the mixture is too weak. In this case the main jet must be replaced by others of the next sizes up until the one, which gives the correct result, is found.
2. If the throttle valve is fully turned on, and the engine gives a muffled sound from the exhaust or is missing explosions with emission of black smoke, and by closing the air valve the defect increases, this indicates too rich a mixture. In this case it is necessary to replace the fitted main jet by others of the smaller sizes until the one, which gives the correct result, is found.

A correct carburation at high speed must be obtained at completely opened air valve.
It must be born in mind that it is advisable to use the size of the main jet which will have given the best result in power or highest speed but that will have however kept the engine at a temperature of safety.
Exact main jet = normal engine temperature
Small main jet = higher engine temperature
Large main jet = lower engine temperature
Only following scrupolously the above instructions and using a sensibility at the highest point when effecting the tests on road and at the brake, one may arrive at a perfect adjustment of the carburetor and therefore at the best performance of the engine itself.
As approximate adjustment data please see at the adjustment key for gasoline.

BASE ADJUSTMENT FOR GASOLINE

Carburetor type	Throttle valve	Jet needle	Needle jet	Main jet	Pilot jet
SSI-C 18-20-22-23	Cat. N° 1916 70	Cat. N° 2289 R2 at 3 groove	Cat. N° 1805 260	Cat. N° 1126 85-95-105-110	Cat. N° 1159 50
SS-A, SSI-A, SSF-A, SSFF- A 24-25 26-27-28 29-30	Cat. N° 2384 90 100 100	Cat. N° 1824 M7 at 3 groove M13 at 3 groove M13 at 3 groove	Cat. N° 1805 260 265 270	Cat. N° 1126 115-120 125-130-135 140-145	Cat. N° 1159 50 50 50
SSI-B, SSFI-B 32	Cat. N° 3466 110	Cat. N° 1141 N1 at 3 groove	Cat. N° 1121 315	Cat. N° 1126 155	N/A
SSI-B, SSFI-B 35	Cat. N° 3686 120	Cat. N° 1900 P1 at 3 groove	Cat. N° 1121 320	Cat. N° 1126 170	N/A
SSI-B 36-38 40-42	Cat. N° 4545 130 150	Cat. N° 2470 S1 S1	Cat. N° 1121 325 330	Cat. N° 2475 180-200 220-240	N/A