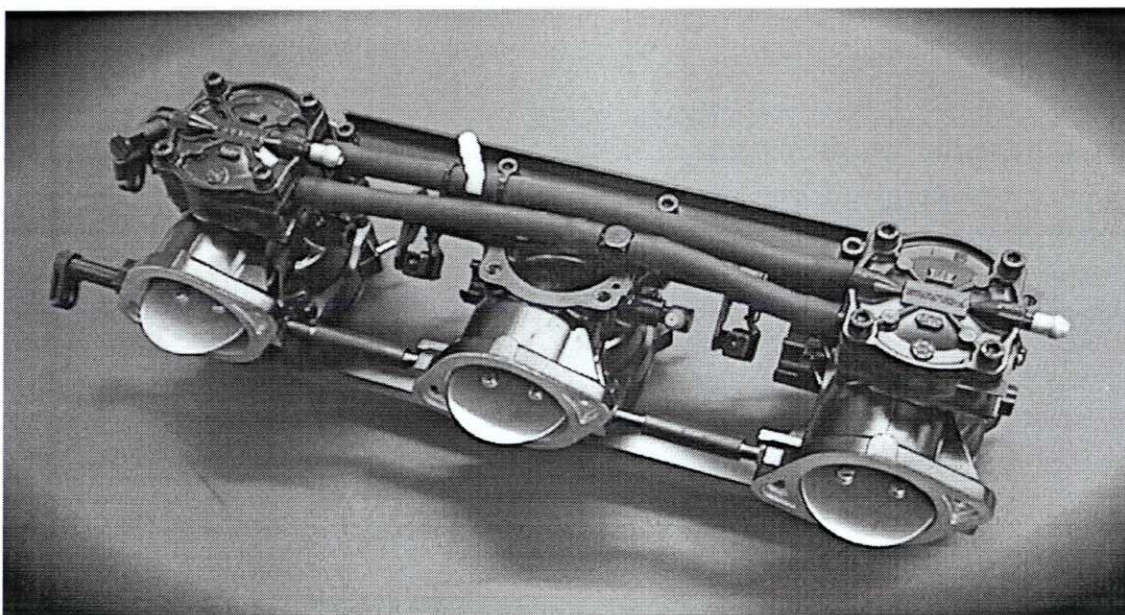




## BING DIAPHRAGM CARBURETOR TYPE 36



The BING diaphragm carburetor **TYPE 36** was designed for two stroke engines especially for jet ski's or jet bikes. This type is available as a single carburetor as well as a twin or triple carburetor assembly.

The operation of the diaphragm carburetor is almost independent of the assembly location on the engine. The fuel is supplied by either one or two diaphragm pumps, which are integrated in the carburetor body.

The carburetor is characterized by separated bypass and idle systems, which in many cases make the additional use of an accelerator pump unnecessary. Also there is a possibility to use fixed jets instead of adjustment screws.

Most of the assembled parts are made out of CrNi-steel in order to protect the carburetor against corrosion (salt water). The use of aluminium and plastic material contributes to weight reduction. To get a long term corrosion protection, the carburetor can be coated with a fuel and sea water proof finish.

### Technical details:

Carburetor length:	95 mm
Mounting screw holes distance x angle x Ø:	68 mm x 20° x 6,4 mm
Throttle valve-Ø:	38/40 mm
Venturi-Ø:	36/38 mm
Ø fuel- and impulse fitting:	8,5 mm
Ø oil fitting:	4 mm
throttle and choke lever can be positioned individually.	

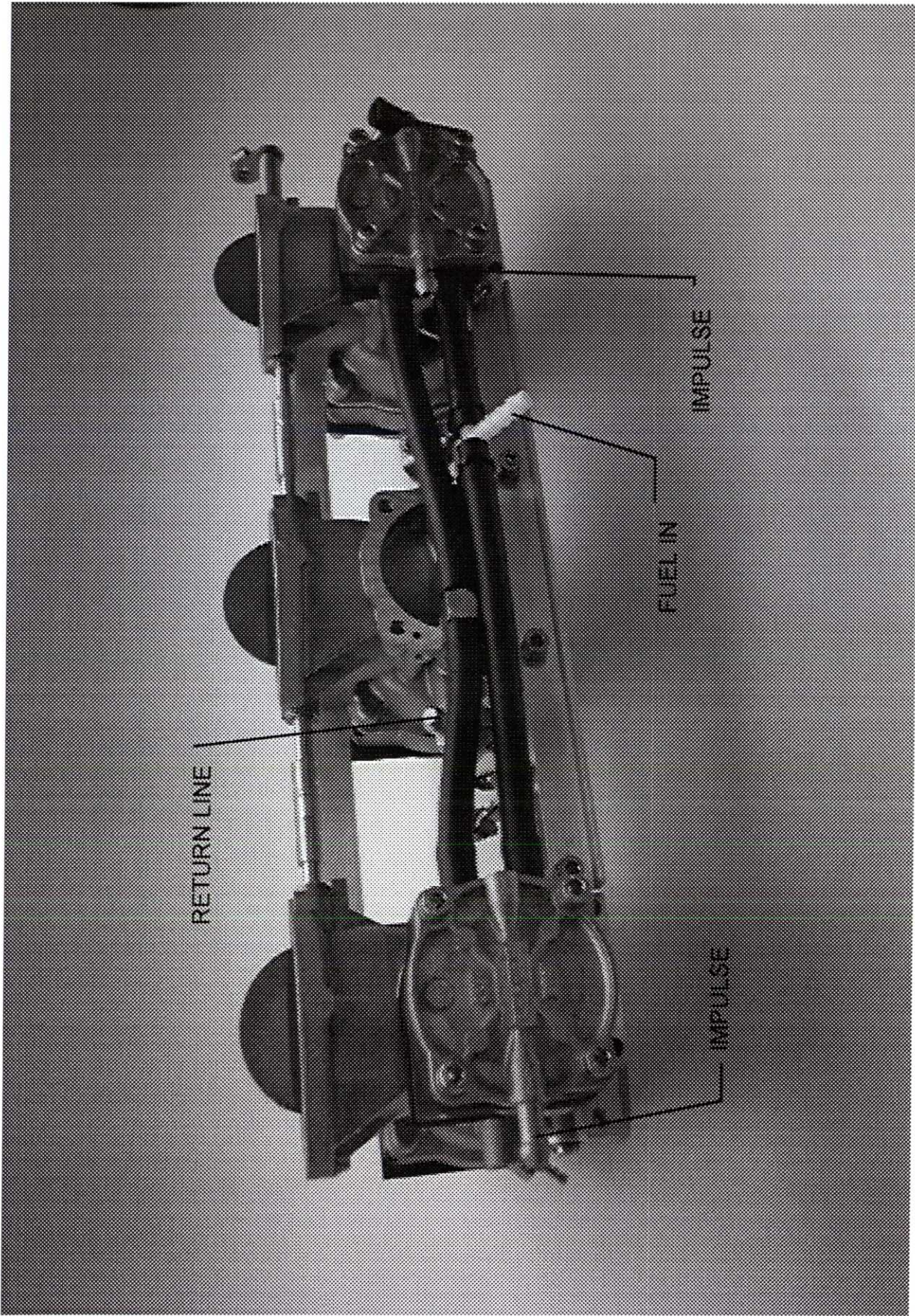
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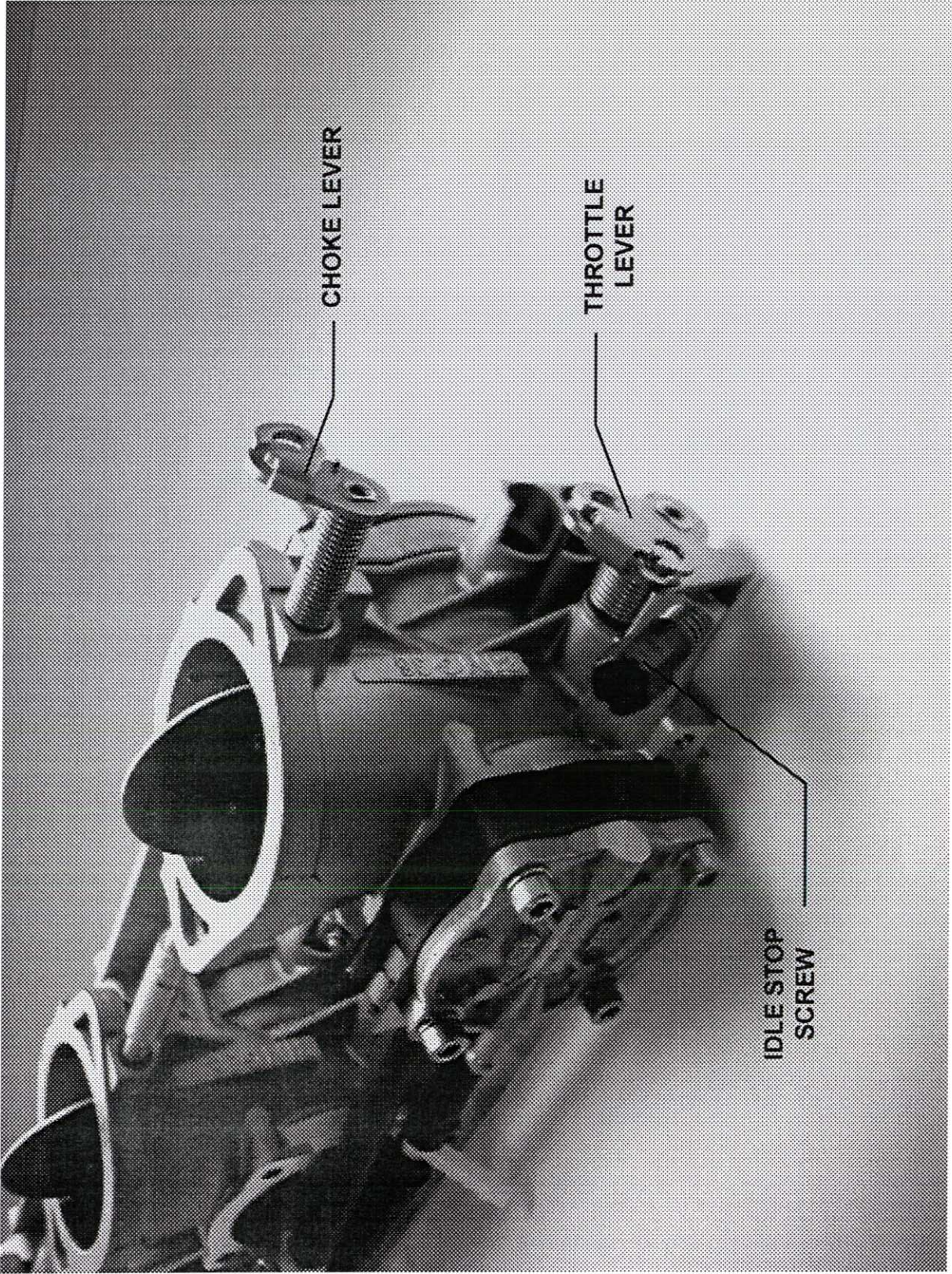


Register-Gericht: Nürnberg Nr. 568 Abt. B  
Telefon (09 11) 32 67-0  
Telefax (09 11) 32 67-299

Geschäftsführer: Joachim Preißl  
Postbank Nürnberg  
199 04-851  
(BLZ 760 100 85)

Banken  
Dresdner Bank Nürnberg, 1 018 000 00 (BLZ 760 800 40), S.W.I.F.T.-Adresse DE FF 760  
Bayerische Vereinsbank Nürnberg, 7 210 000 (BLZ 760 200 70)  
Deutsche Bank Nürnberg, 614 172 (BLZ 760 700 12), S.W.I.F.T.-Adresse DEUT DE MK  
Commerzbank Nürnberg, 517 470 100 (BLZ 760 400 61)

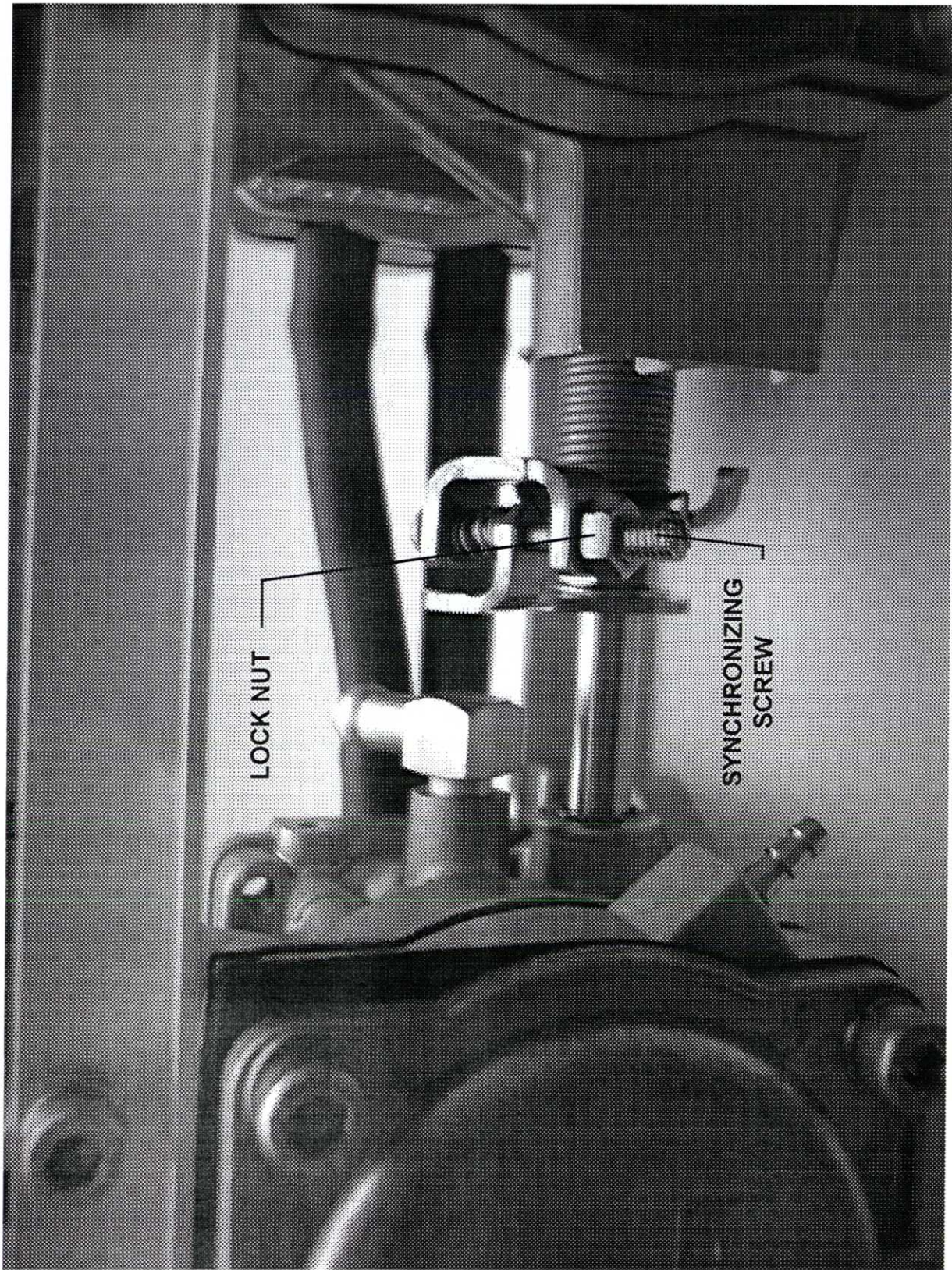




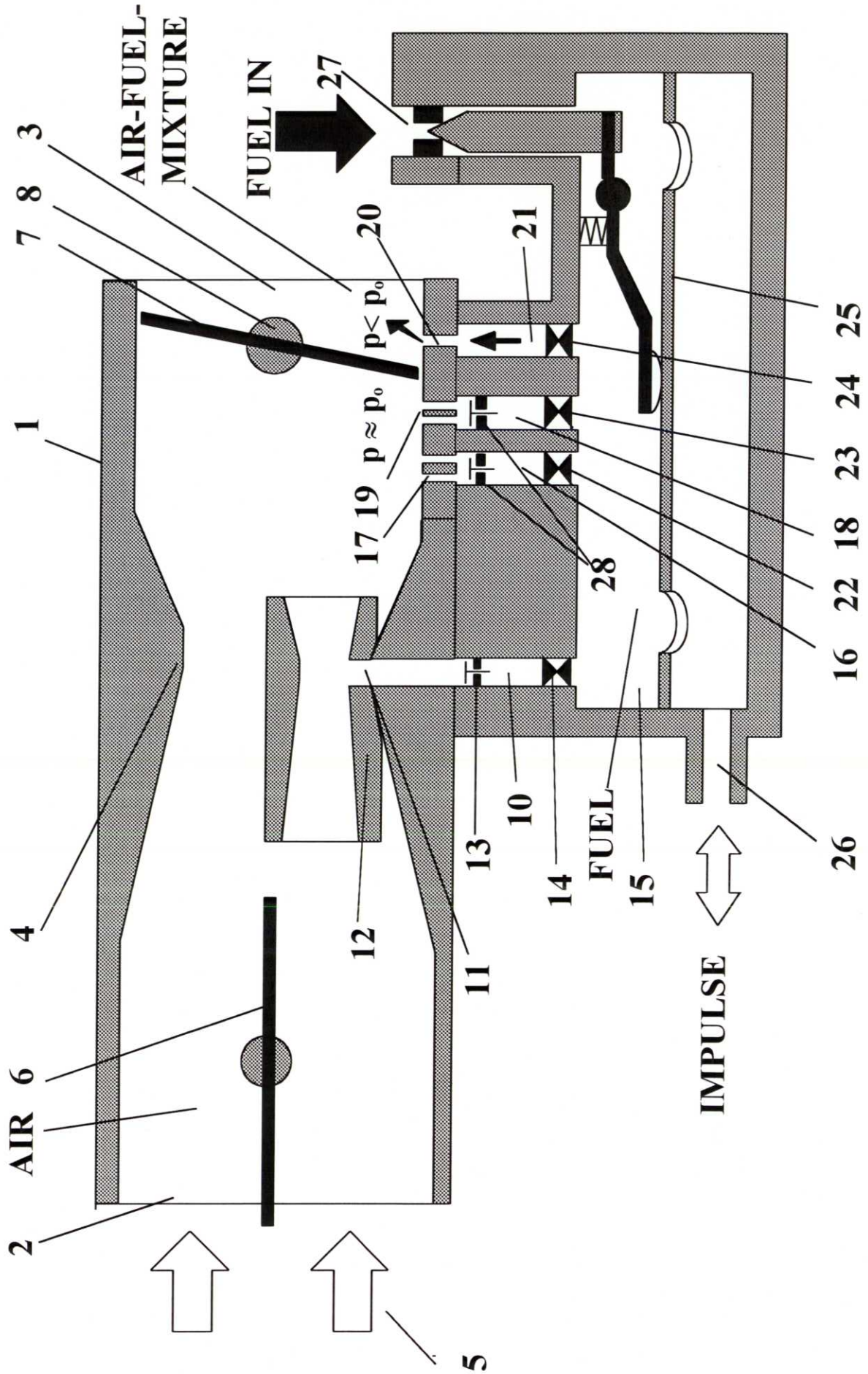
CHOKE LEVER

THROTTLE LEVER

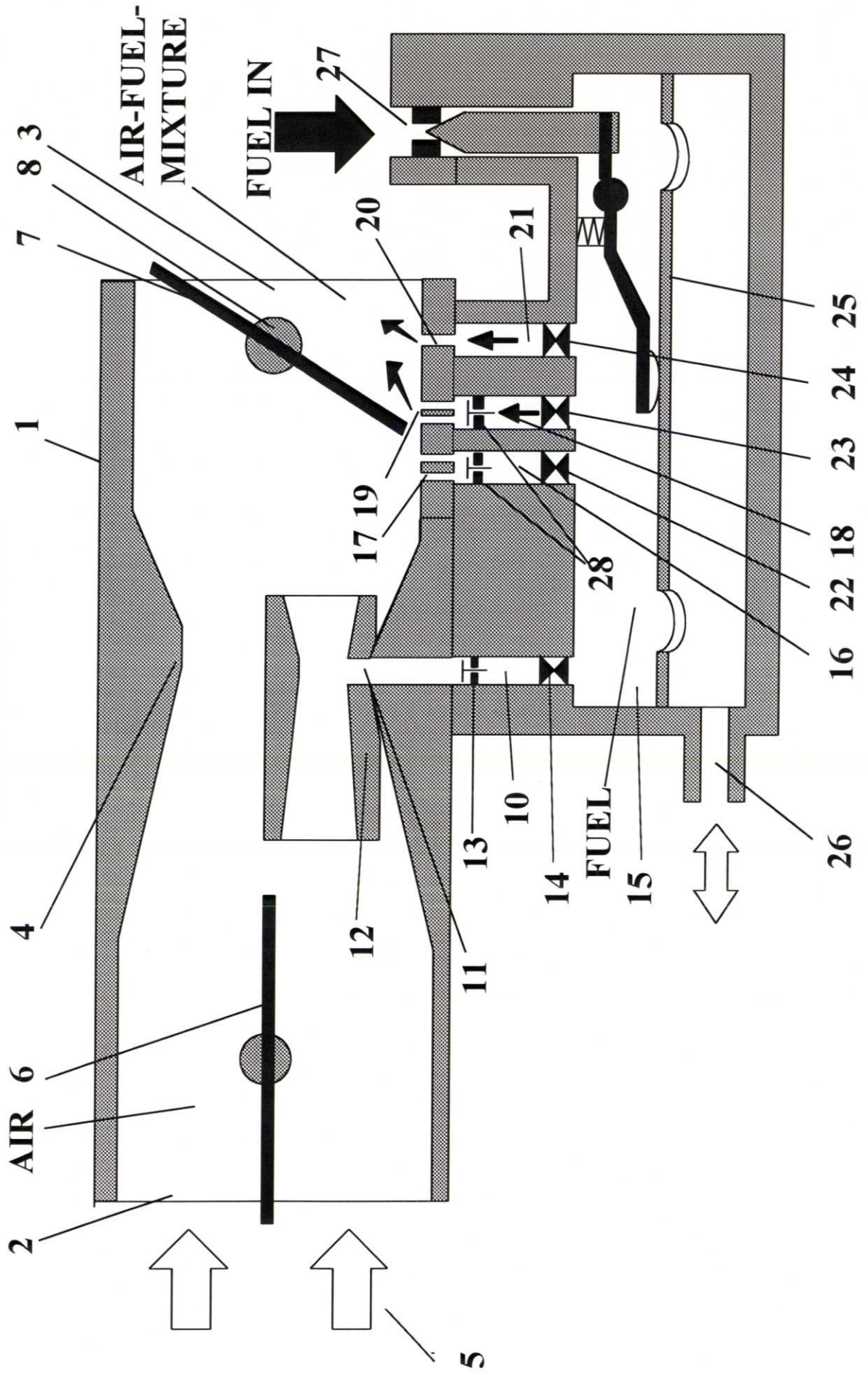
IDLE STOP SCREW



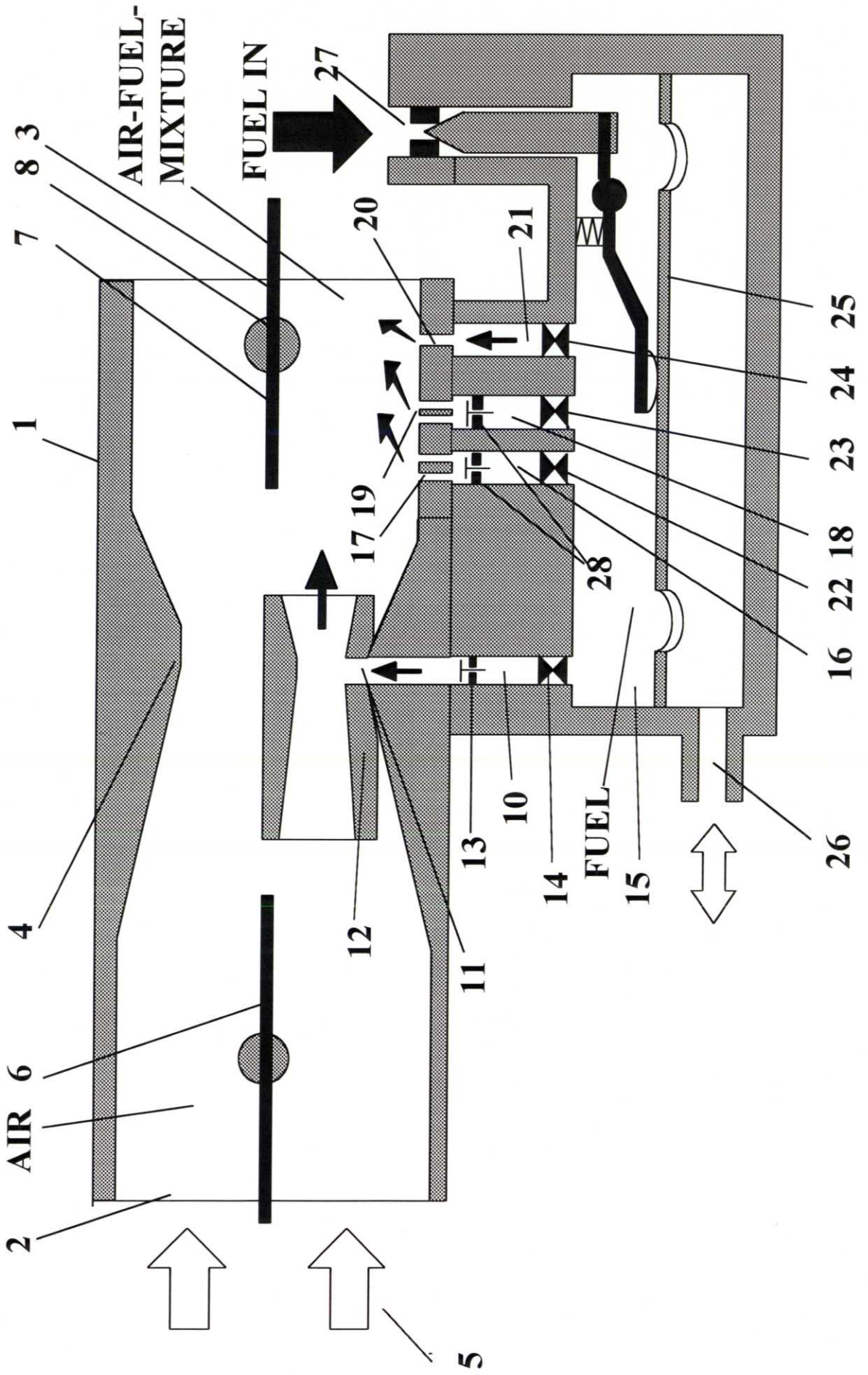
**IDLE**



# PART THROTTLE



W.O.T.



## DENOTATION LIST:

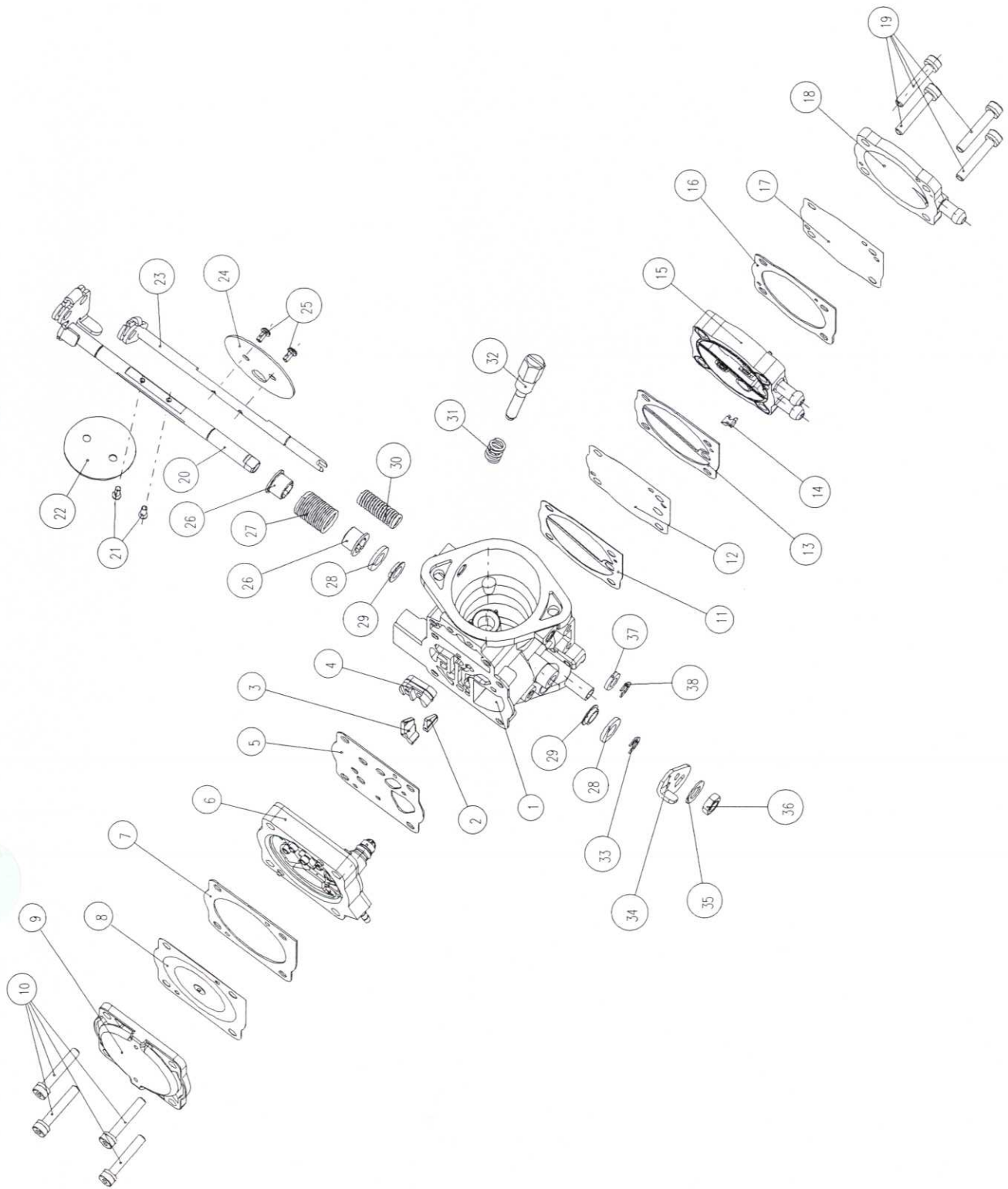
- 1 carburetor housing
  - 2 air intake
  - 3 air-fuel mixture outlet
  - 4 venturi
  - 5 direction of airflow
  - 6 choke valve
  - 7 throttle valve
  - 8 throttle shaft
  - 10 main fuel bore
  - 11 main fuel outlet
  - 12 boost venturi
  - 13 check valve (main system)
  - 14 main jet
  - 15 fuel chamber
  - 16 transition chamber
  - 17 transition bore
  - 18 bypass chamber
  - 19 bypass bore
  - 20 idle exit bore
  - 21 idle chamber
  - 22 transition jet
  - 23 bypass jet
  - 24 idle jet
  - 25 diaphragm
  - 26 impulse nipple
  - 27 needle valve
- 
- $p_0$  atmospheric pressure
  - $p$  local pressure



## BING Type 36

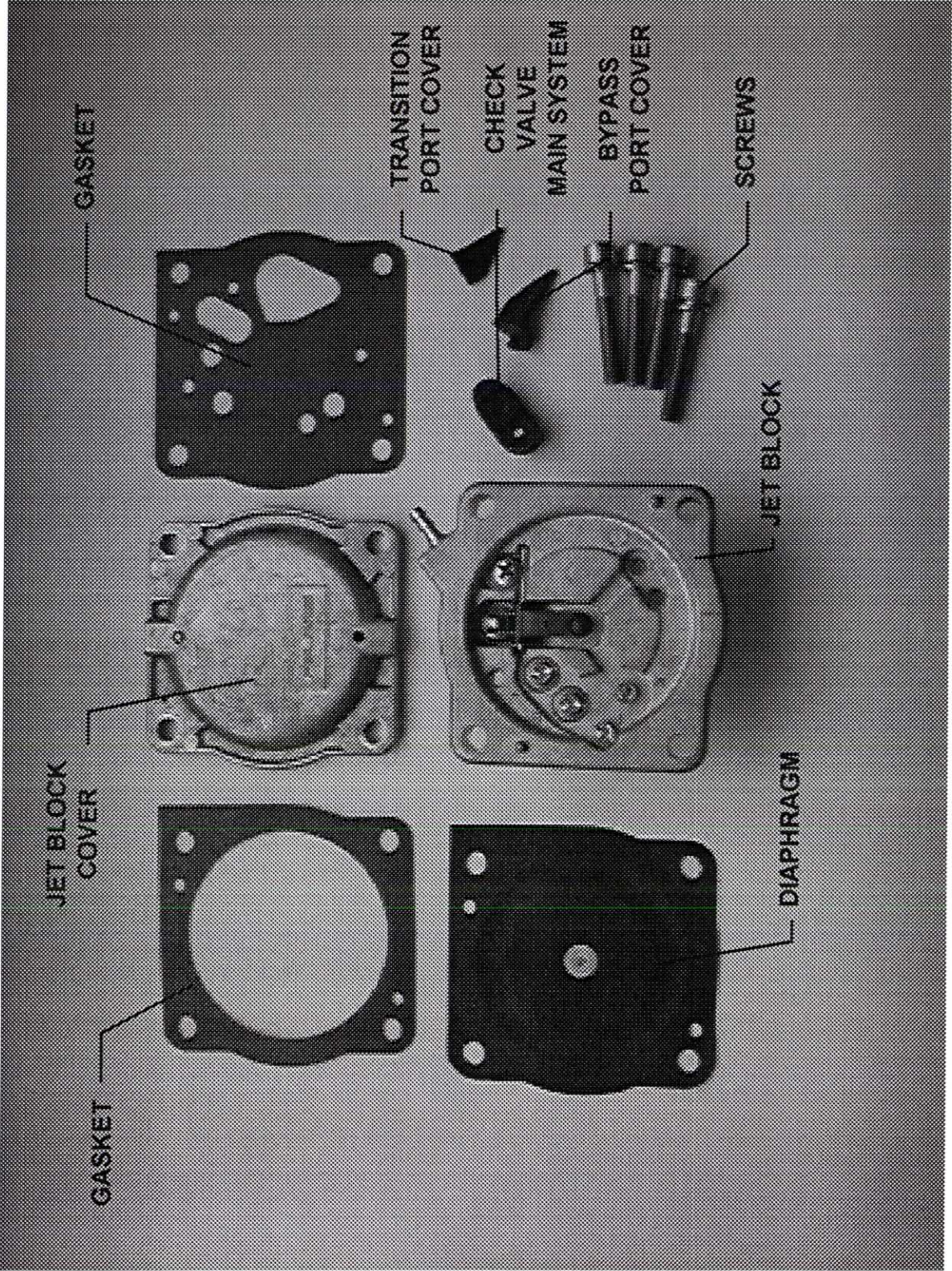
### screw torque list:

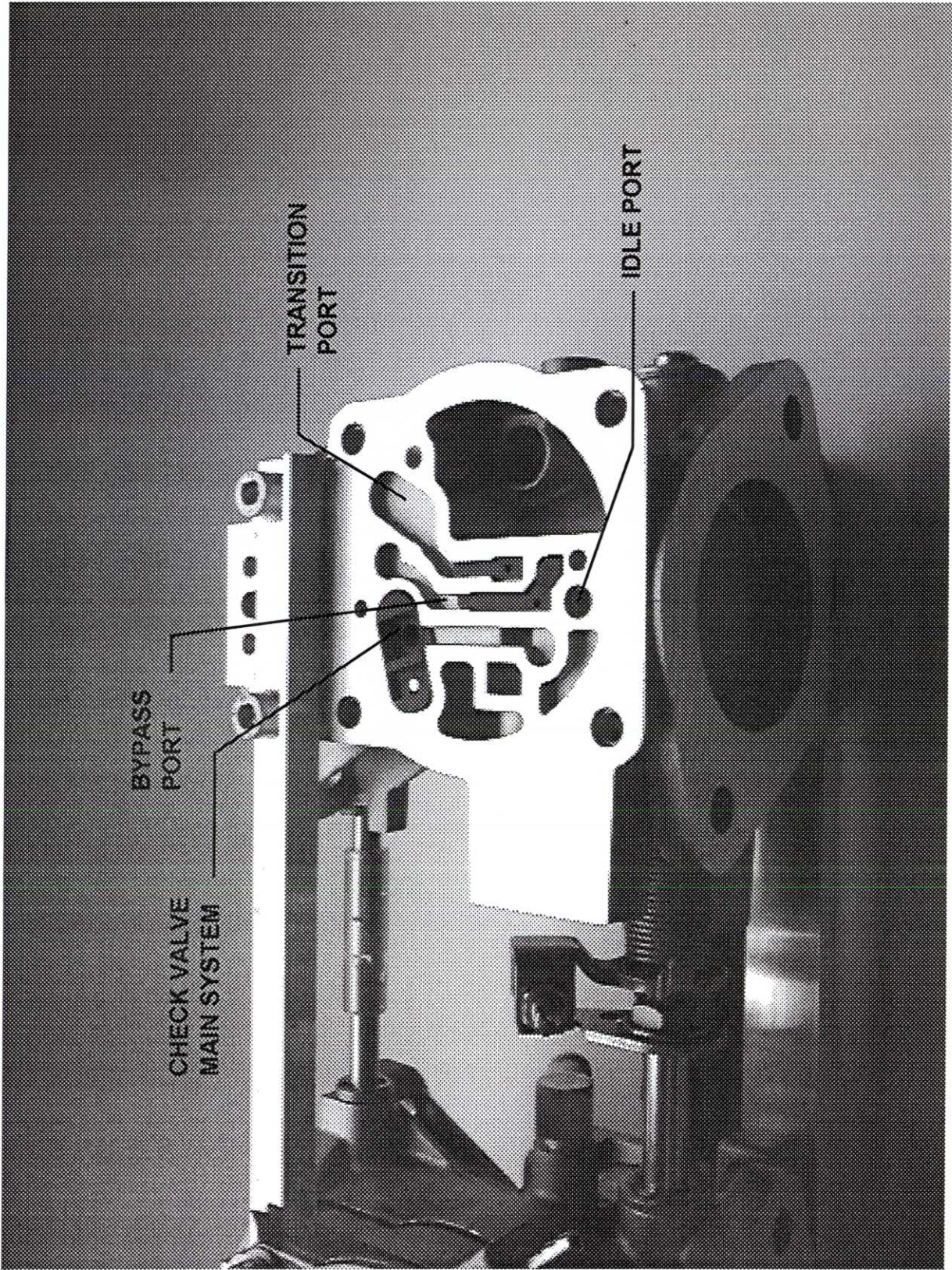
■ jets	0,8 Nm	
■ throttle plate	1,2 Nm	Loctite 270
■ choke plate	1,2 Nm	Loctite 270
■ needle valve lever	1,5 Nm	
■ pump valve	1,0 Nm	
■ nut M8 (lever-throttle-shaft)	3,8 Nm	Loctite 270
■ nut M5 (synchro-lever)	1,8 Nm	
■ jet block cover	4,5 Nm	
■ pump cover	4,5 Nm	
■ bracket	4,5 Nm	



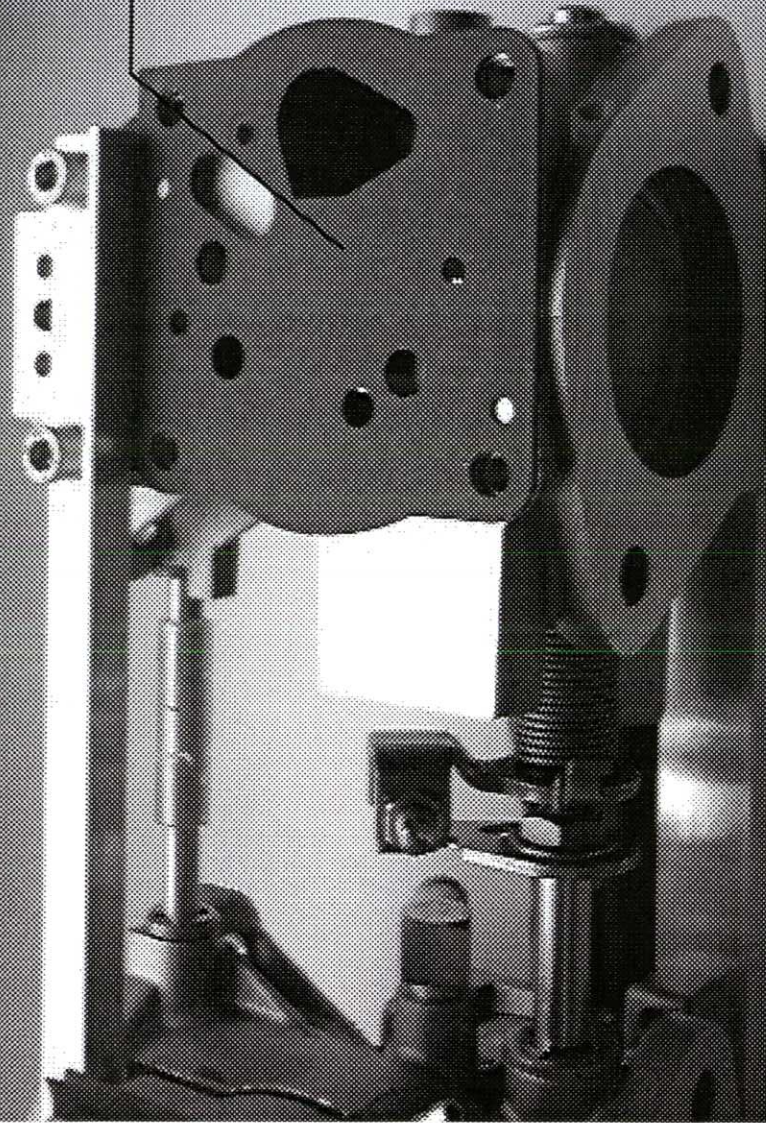
## DENOTATION LIST FOR EXPLOSION DRAWING

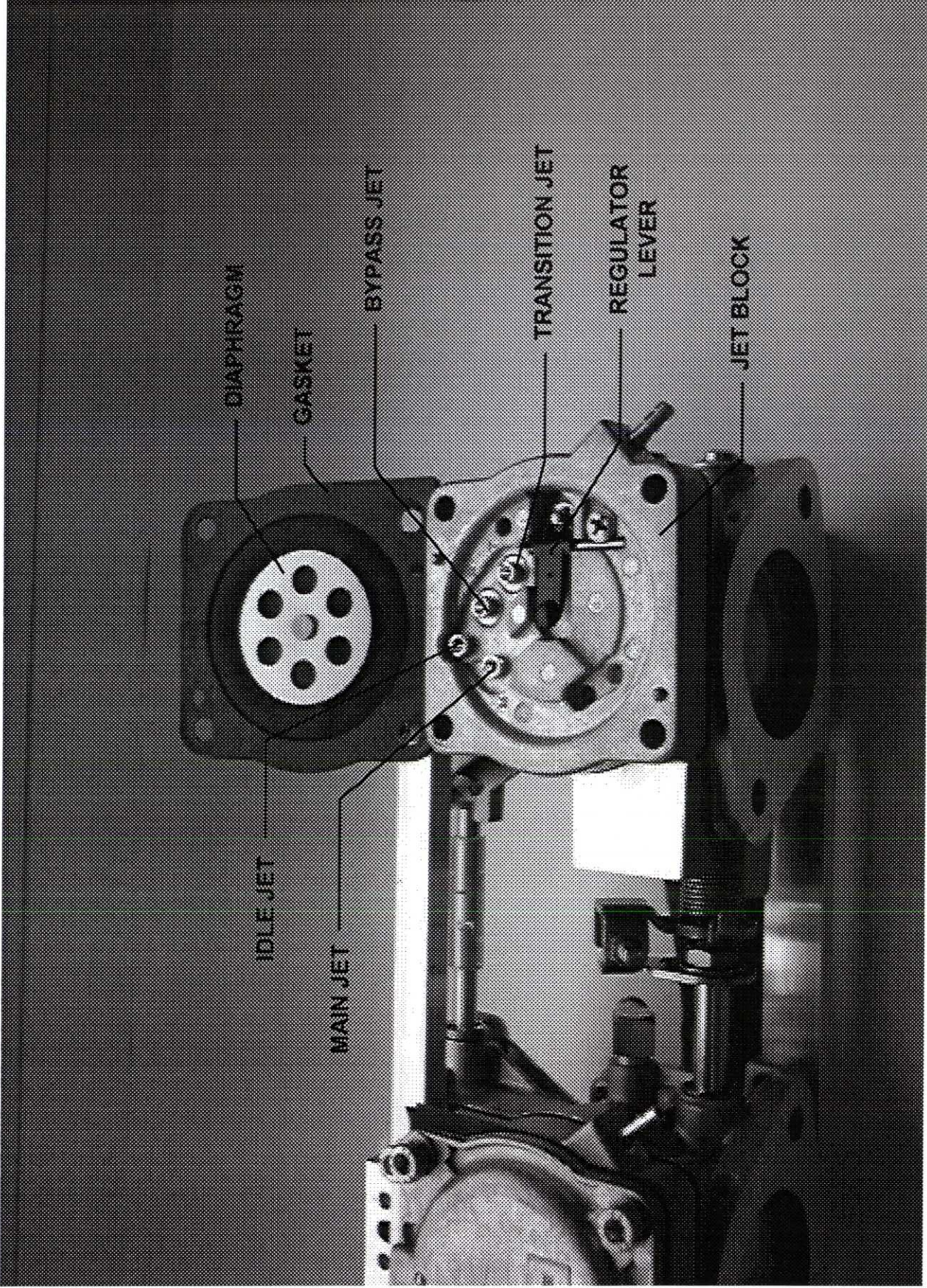
- |     |                         |     |                 |
|-----|-------------------------|-----|-----------------|
| 1.  | carburetor housing      | 20. | throttle shaft  |
| 2.  | transition port cover   | 21. | screw           |
| 3.  | bypass port cover       | 22. | throttle valve  |
| 4.  | check valve main system | 23. | choke shaft     |
| 5.  | gasket                  | 24. | choke valve     |
| 6.  | jet block               | 25. | screw           |
| 7.  | gasket                  | 26. | sleeve          |
| 8.  | diaphragm               | 27. | spring          |
| 9.  | jet block cover         | 28. | washer          |
| 10. | screw                   | 29. | sealing ring    |
| 11. | gasket                  | 30. | spring          |
| 12. | diaphragm               | 31. | spring          |
| 13. | gasket                  | 32. | idle stop screw |
| 14. | plug                    | 33. | lock ring       |
| 15. | pump housing            | 34. | lever           |
| 16. | gasket                  | 35. | lock washer     |
| 17. | diaphragm               | 36. | nut             |
| 18. | pump cover              | 37. | washer          |
| 19. | screw                   | 38. | lock ring       |





GASKET  
BETWEEN  
HOUSING AND  
JET BLOCK





DIAPHRAGM

GASKET

BYPASS JET

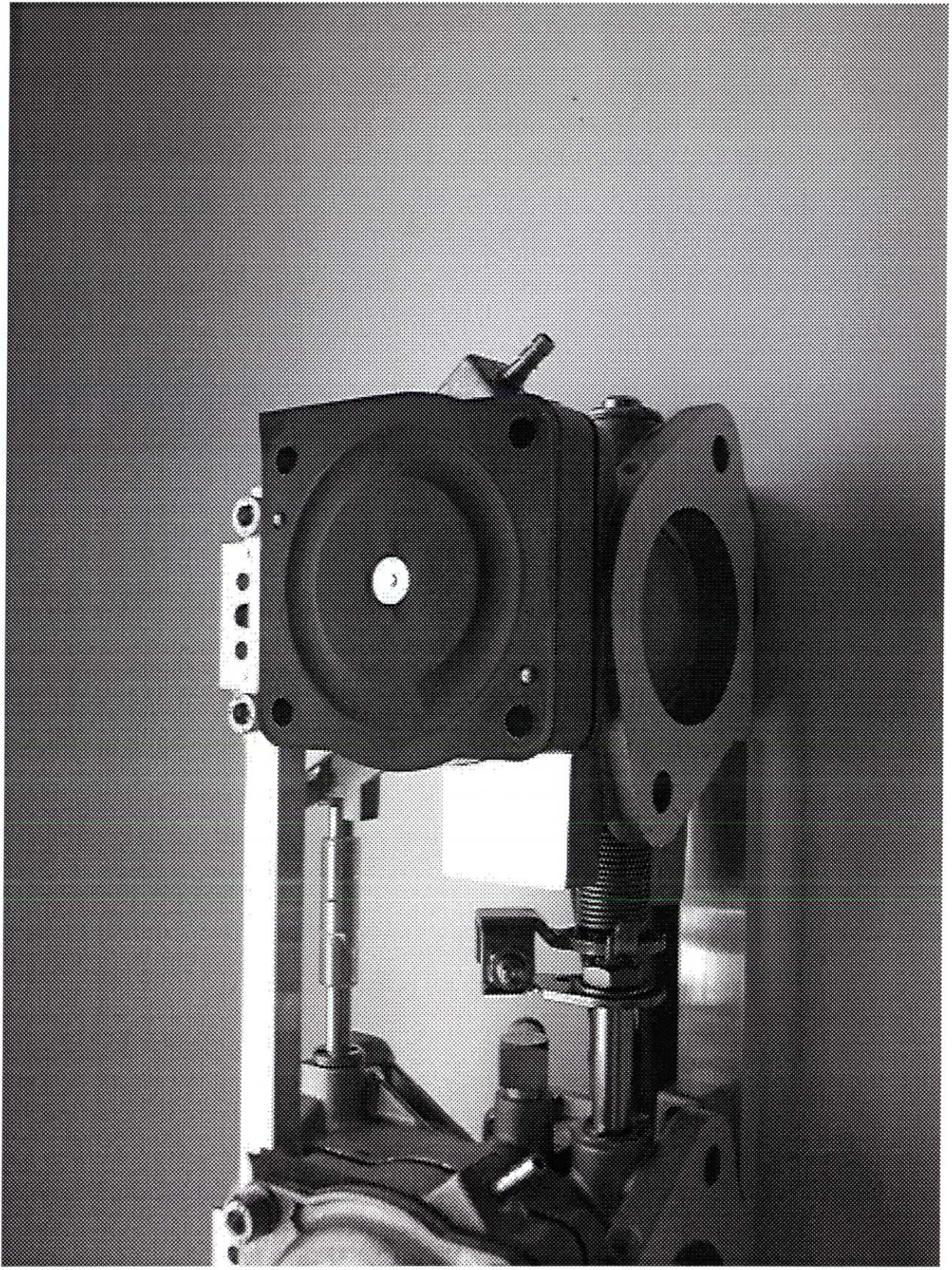
TRANSITION JET

REGULATOR  
LEVER

JET BLOCK

IDLE JET

MAIN JET



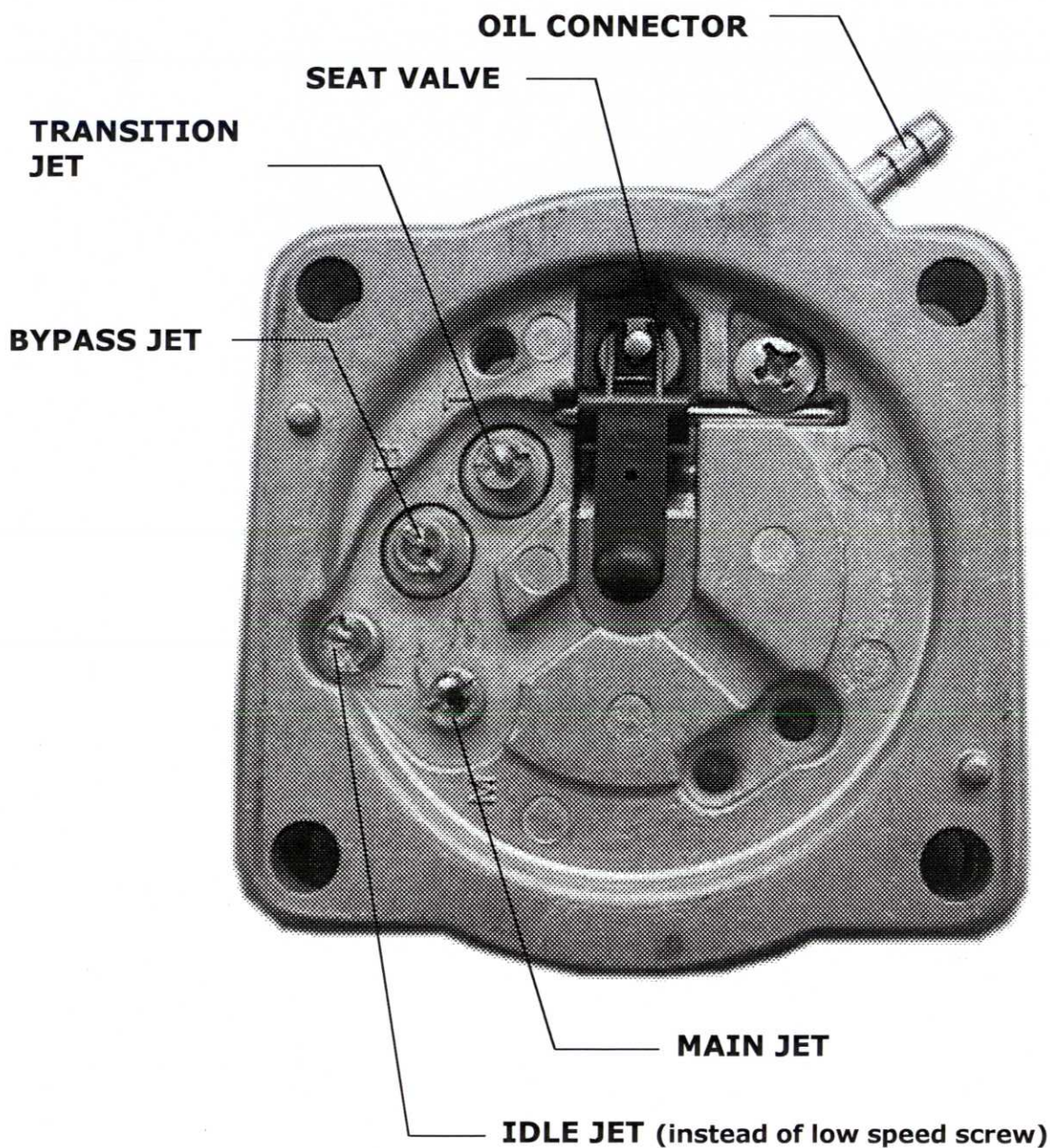




## DETAILED INFORMATION TYPE 36



# JET BLOCK TYPE 36



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Register-Gericht: Nürnberg Nr. 568 Abt. B

**Telefon**  
(09 11)  
32 67-0

**Telefax**  
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Nürnberg  
199 04-851  
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Commerzbank Nürnberg, 517 470 100 (BLZ 760 400 61)

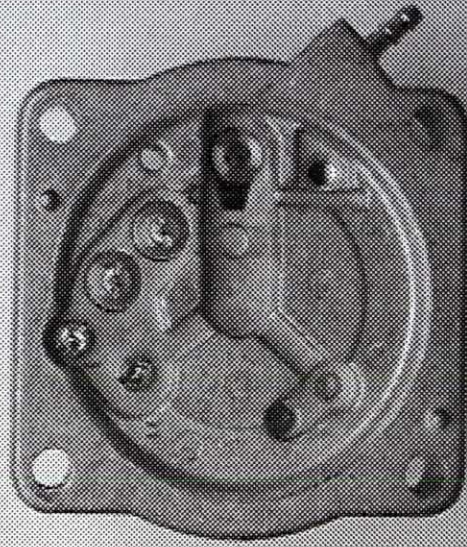
REGULATOR  
LEVER

VALVE  
NEEDLE

REGULATOR  
SPRING

SCREW

PIN

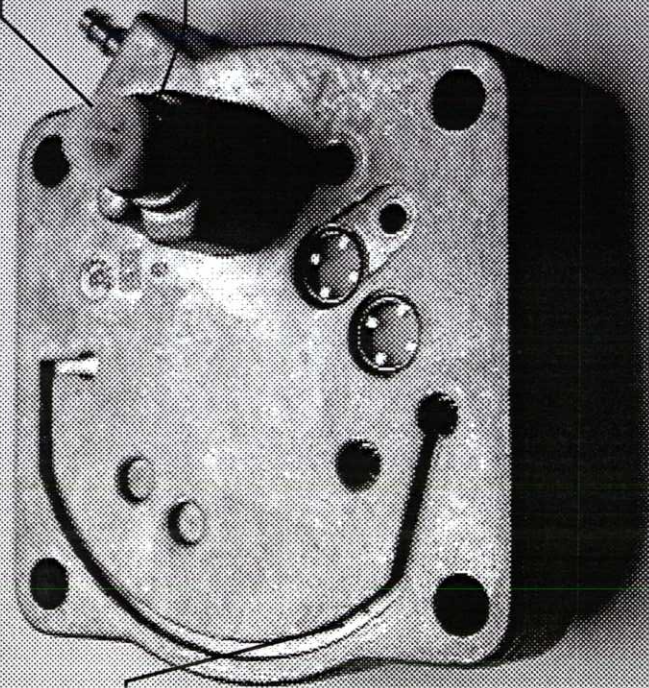


BACK SIDE JET BLOCK

FILTER

O-RING

IDLE PORT



## Recalibration of a BING carburetor related to atmospheric conditions

Elevation (m) Temperature (°C)	0	500	1000	1500	2000	2500	3000	3500	4000
-30	104	103	101	100	98	97	95	94	93
-20	103	102	100	99	97	96	95	93	92
-10	102	101	99	98	96	95	94	92	91
0	101	100	98	97	95	94	93	91	90
+10	100	99	97	96	95	93	92	91	89
+15	100	99	97	96	94	93	92	90	89
+20	100	98	97	95	94	93	91	90	88
+30	99	97	96	94	93	92	90	89	88
+40	98	96	95	94	92	91	90	88	87
+50	97	96	94	93	92	90	89	88	86

d

To calculate the new jet size for a changed atmospheric condition, please use following formula:

$$D2 = (d2/d1) \times D1$$

new jet size: D2

current jet size: D1

d1 and d2 you can get out of the enclosed table by looking at temperature and elevation. d1 is current condition, d2 is new condition.

**The jet size number of each jet is stamped on the outside margin of each jet**

## AVAILABLE JET SIZES FOR BING CARBURETOR TYPE 36

**BING Part Number: 44-033/(size)**

26/28/30/32/34/36/38/40/42/44/46/...up to.../150

152/155/158/160/162/165/168/170

175/180/185/190/200

if necessary, smaller increments are possible!

## POP-OFF PRESSURE CHART BING TYPE 36

Ø Needle Valve Bore	Arm Spring				
	0,84 N	0,75 N	0,64 N	0,51 N	0,42 N
1,5	3,8 bar/55,1 psi	3,3 bar/47,86 psi	2,9 bar/42,06 psi	2,4 bar/34,8 psi	2,05 bar/29,73 psi
1,8	2,7 bar/39,16 psi	2,5 bar/36,26 psi	2,3 bar/33,36 psi	1,65 bar/23,93 psi	1,55 bar/22,48 psi
2,0	2,2 bar/31,91 psi	2 bar/29,01 psi	1,7 bar/24,66 psi	1,35 bar/19,58 psi	1,2 bar/17,40 psi

Single carburetor: 36/38/101 and SK 13337 use a valve bore of 1,8mm and a spring force of 0,42 N at Lo = 10,4 mm