



*Mikuni's HSR42, HSR45 and HSR48 Smooth Bore Carburetors are the finest motorcycle carburetors made today. They give superb throttle response and deliver all the air flow needed for any level of Harley performance.*



**Going fast has never been so easy. The number one performance carburetor for all Harley-Davidsons and American big twins now slips onto any late model Harley using the original throttle cables. Mikuni's Big Twin and Sportster/Buell Easy Kits even use your bike's existing manifold, choke cable and air filter. Keep your Harley's stock factory look and fit with better throttle response, improved acceleration, increased power and torque. Mikuni's smoothbore, flatslide throttle with roller bearings, and accelerator pump technology delivers peak performance from idle to WFO. Available in 42, 45, 48mm throttle bores for use with stock, mild, and highly modified engines**



*Bolt On a 25% Power and Torque Increase!*

*Every Mikuni Carburetor Kit is designed to be an easy bolt-on application. Each HSR carburetor in the kit comes pre-jetted and ready to run!. They also use stock Harley-Davidson throttle cable.*

Modified Harley or Harley-based engines tend to fall into one of three categories:

**Modified stock** — This engine typically has stock cylinder heads, a high flow air cleaner, high flow mufflers, perhaps a bolt-in cam and a Mikuni HSR42 carburetor, we suggest an "Easy Kit".

**Highly modified** — A hotter cam, professional cylinder head port work, a more specialized exhaust system, high compression pistons and a Mikuni HSR45 carburetor, we suggest a "Total Kit".

**All-out ground pounder** — Highly modified heads, a displacement increase, either by way of fitting larger pistons, a stroker kit or both. This engine is more likely to be a special engine, built from the ground up to be stronger and to process more air than even a highly modified Harley motor. This is the sort of motor that should have the HSR48.



### EASY KITS.

#### Keep your stock look

These kits are designed to work with your original Harley-Davidson intake manifold, choke cable, air cleaner and throttle cables.

You can run other high performance air filters designed for the CV type carb by using the special adapter included in the kit.



### Easy kits for Sportsters, Big Twin and Twin Cam Models

#### **1990 to 1999 - 1340cc Big Twin Evolution with stock CV type manifold.**

TCI #HSR42-7-K

Includes 42mm carb, airbox adaptor and chrome cover.

#### **1999 to present Twin Cam models**

TCI #HSR42-18-K

Includes 42mm carb, air box adaptor and instructions. Use the stock oval chrome cover.

#### **1994 to 2003 Sportster 1200**

TCI #HSR42-10-K

#### **1994 to 2003 Sportster 1200 (Buell Models)**

TCI #HSR42-11-K

### TOTAL KITS.

#### For the performance you've been craving

These kits are complete with everything needed for a total installation. Kits include an HSR 42mm or 45mm carburetor, new performance manifold, rubber flange, high flow K&N Filter, chrome cover, chrome breather kit and mounting hardware.



Stock Throttle Cables from 1990 and later models can be used.

Note: 1984-89 Evo models will need new cables from similar 1990-95 model

### Total Kits for Big Twin Evolutions and Twin Cam Models

Stock throttle cables from 1990 and later Big Twins can be used. Note: 1984 to 1989 models will need new cables from a 1990 to 1995 model.

### **HSR 42 kits**

#### **1984 to 1999 1340 Big Twin Evo.**

TCI #HSR42-8-K

Includes breather kit #KHS-020 for 1993 and later models. Note: 1984 to 1989 models require cables from 1990 to 1995.

#### **1999 to present Twin Cam 88/95**

TCI #HSR42-19-K

Includes new breather kit # KHS-030 for Twin Cams. Note: Use your stock throttle cables

### **HSR 45 kits**

#### **1984 to 1999 1340 Big Twin Evo.**

TCI #HSR45-2-K

Includes 45mm big bore carb, Kit #KHS-020 breather and a 45mm flange

#### **1984 to 1999 1340 Big Twin Evo.**

TCI #HSR45-3-K

Same as kit above without intake manifold

#### **1999 to present Twin Cam 95.**

TCI #HSR45-4-K

Includes 45mm big bore carb, breather kit #KHS-030, new manifold with MAPS location and 45mm flange.

## HSR48 - For the baddest of the Bad.

Mikuni's new HSR48 is a special version of the proven HSR42 carburetor. Its purpose is to provide maximum airflow for the most demanding high performance engines.

The amount of power any engine can deliver is directly related to the volume of air it can use in a given time together with its efficiency in using that air. Everything else being equal, more air equals more power.

Leaving port and combustion chamber design aside, air flow through an engine can be enhanced or limited by anything it must pass through. A restrictive air cleaner assembly, too small carburetor, restrictive intake manifold and a restrictive or poorly designed exhaust system can (each or all) limit power output. The HSR48 was developed to deliver additional air flow to highly developed engines.

There is little to be gained from installing the HSR48 on an engine with stock cylinder heads or one that is going to be fitted with an exhaust system more suited to looking good than passing gas. The number of bolt-on performance options becomes very narrow when one attempts to get their engine above 100 (or so) Horsepower. We advise that you carefully consider the suitability of other performance components when you consider installing the new HSR48.

Our HSR48 is slightly larger than either the HSR42 or the HSR45. It is taller and the spigot (engine side) is larger in diameter. This may result, with some installations, in interference problems with chassis parts.

### Air Flow:

The stock Harley carburetor flows about 185 CFM (cubic feet per minute) when flow is measured at a pressure difference of 12-inches of water. All the Mikuni HSR series flow considerably more:

Stock: 185 CFM

HSR42: 213 CFM

HSR45: 237 CFM

HSR48: 270 CFM

If carburetor air flow were the only factor, the HSR48 could deliver almost 50% more power than the stock carburetor. It isn't, of course, but a 50% gain could not be realized without a high flow carburetor.

If you think your motor is a candidate for an HSR48 in standard or polished carburetor , contact us at TCI Toll free 800-661-9438

## Mikuni HSR INDIVIDUAL CARBURETORS

Going fast has never been so easy. The number one performance carburetor now slips onto your Harley using the original throttle cables. Mikuni's Big Twin and Sportster/Buell Easy Kits even use your bike's existing manifold, choke cable and air filter. Keep your Harley's stock factory look and fit, with better throttle response, improved acceleration, increased power and torque. Mikuni's smoothbore, flatslide with roller bearings, and accelerator pump technology delivers peak performance from idle to Wide Open Throttle.

These carburetors are for all Harley Davidson owners and are available in standard aluminum finish or the chrome and polished version.

*NOTE: Choke cable is included except in the TM42-6, which will use stock cable from CV type carb.*

|         |                 |                 |
|---------|-----------------|-----------------|
| TM42-6  | HSR 42 mm Carb. | Standard finish |
| TM42-6P | HSR 42 mm Carb. | Polished finish |
| TM45-2  | HSR 45 mm Carb. | Standard finish |
| TM45-2P | HSR 45 mm Carb. | Polished finish |
| TM48-2  | HSR 48 mm Carb. | Standard finish |
| TM48-2P | HSR 48 mm Carb. | Polished finish |



## THROTTLE CABLES for HSR

HSR42/45 Carb Kits sold from 1994 to 1999 required special Mikuni throttle cables. HSR42 carbs manufactured after March 1999, and HSR45 manufactured after March 2000 use stock Harley-Davidson cables.

|                  |                             | HS 40       | HSR42/45/48 |
|------------------|-----------------------------|-------------|-------------|
|                  |                             | Part No.    | Part No.    |
| 1995 and Earlier | Standard Length (38") Open  | RS36/34-A   | HS42/028-A  |
| "                | Standard Length (38") Close | RS36/35-A   | HS42/029-A  |
| "                | Longer Length (47") Open    | RS36/34/6-A | KHS/039     |
| "                | Longer Length (47") Close   | RS36/35/6-A | KHS/040     |
| "                | Shorter Length (34") Open   | RS36/34-4-A |             |
| "                | Shorter Length (34") Close  | RS36/35-4-A |             |
| 1996 and Later   | Longer Length (47") Open    |             | KHS/041     |
| "                | Longer Length (47") Close   |             | KHS/042     |
| "                | Standard Length (38") Open  |             | KHS/043     |
| "                | Standard Length (38") Close |             | KHS/044     |

Note: Open=Throttle / Close=Idle

## MIKUNI HSR OPTIONAL & REPLACEMENT PARTS

### Crankcase Head-Breather Kits

For the installation of HSR Carburetor Kits using the Mikuni K&N high flow filter on Big Twins and Twin Cams.

KHS-010

- To mount HS40 carb and air filter, includes breather bolts and brackets.

KHS-020

- To mount HSR42/45 carb and filter to Evo Big Twins, does not include Z-brackets. (Note: Z-brackets are found in the Evo HSR Carb Kits.)

KHS-030

- To mount HSR 42/45 carb and filter to Twin Cam engine, includes the new chrome banjos, vent bolts and brackets.

### Jet Assortment Kit for HSR42

KHS-025

This jet assortment kit contains 44 pieces in a special jet box. Included are:

- 2 each - 150 through 170 main jets
- 1 each -95, -96 and -97 needles
- 2 each #60 a/p nozzles
- Needle clip and washers.
- 2 each - 20 through 32.5 pilot jets



### Accelerator Pump Nozzle

TM42/11-(SIZE)

- 50 Leaner
- 60 Leaner
- 70 Std

### Needle Valve Assemblies

786-27001-4.2

HSR 42/45 - Standard

786-27001-2.3

HSR 42/45 - Pressure feed only

### Pilot Jet

VM28/486-(SIZE)

Size range 50 to 195 (2.5 increments)

### Main Jet

N100/604-(SIZE)

Size range 50 to 197.5 (2.5 increments)

Size range 200 to 220 (5 increments)

Size range 230-240 (10 increments)

### Jet Needle

J8-8DDY01-(SIZE)

HSR 42 jet needles

J8-8CFY021-(SIZE)

HSR 45 jet needles

- 95 Richer
- 96 Std.
- 97 Leaner
- 98 Leaner

### *The Following Mikuni Accessories are available.*

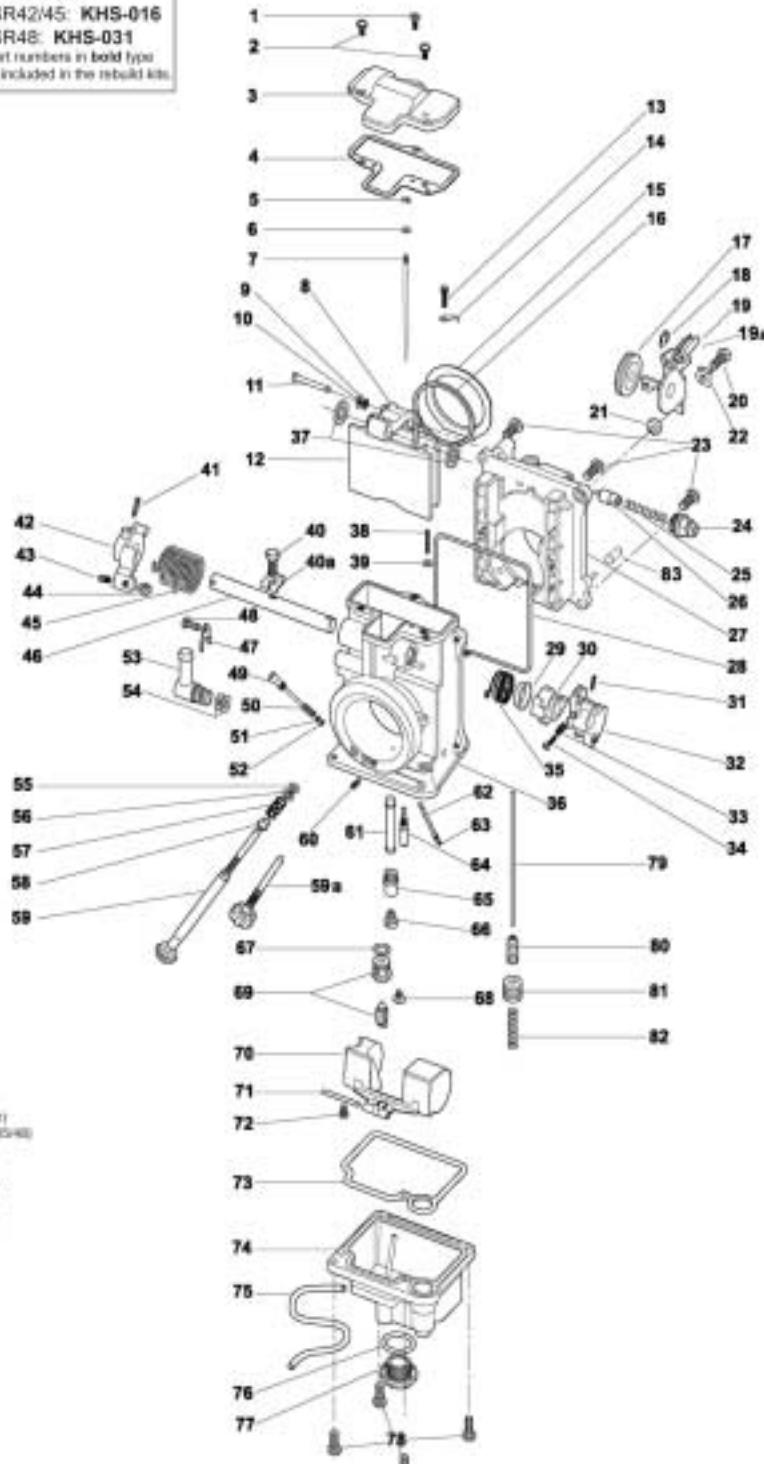
| DESCRIPTION   | HS 40        | HSR 42          | HSR 45          | HSR 48          |
|---|--------------|-----------------|-----------------|-----------------|
| Chrome Carb Cap with Mikuni Logo  |              | KHS-029         | KHS-029         |                 |
| Chrome Carb Cap No Logo   |              | KHS-028         | KHS-028         |                 |
| Carburetor Rebuild Kit (includes gaskets & needle valve)                  | KHS-001      | KHS-016         | KHS-016         | KHS-031         |
| K & N Mikuni Air Filter (standard size 2.5")                              | RS36/25-200  | HS42/012 (2.5") | HS42/012 (2.5") | HS42/012 (2.5") |
| Air Cleaner Cover Chrome (OEM / cut-outs)                                 |              | HS42/059        | HS42/059        | HS42/059        |
| Air Cleaner Cover Chrome (Aftermarket / No cut-outs)                      | RS36/24-200C | HS42/060        | HS42/060        | HS42/060        |
| Air Cleaner Cover Black (Aftermarket / No cut-outs)                       | RS36/24-200B |                 |                 |                 |
| Shovelhead Manifold (10mn Drop)   | RS36/48      | HS42/020-42     | HS42/020-42     | HS42/020-42     |
| Rubber Flange Adapter, Round inlet (with clamp**)                         | KHS-004      | HS42/018-42     | HS42/018-45     | HS42/018-48     |
| Rubber Flange Adapter, Oval inlet (with clamp**)                          |              | HS42/062-42     | HS42/062-45     |                 |
| **Stainless Clamp for Rubber Flange                                       | RS36/02-17   | TMX/002-32      | TMX/002-32      | TMX/002-32      |
| Harley Manifold Spigot Adapter  | MK-413       |                 |                 |                 |
| Push/Pull Twist Throttle Assembly   | RS36/59      | RS36/59         | RS36/59         | RS36/59         |
| Idle Screw Adjuster - Short(optional) - Use spring from stock idle cable. |              | 990-605-065     | 990-605-065     | 990-605-065     |
| Idle Cable Adjuster -Standard - Does not include spring.                  |              | TM42/32         | TM42/32         | TM42/32         |
| Choke Cable, Enricher   | 990-662-001  | 990-662-002     | 990-662-002     | 990-662-002     |
| Air Box Adapter (mount to back plate)                                     |              | HS42/001        | HS42/001        |                 |
| Adapter Screws (Use three per adapter)                                    |              | HS42/002        | HS42/002        |                 |
| O-Ring Seal for Air box Adapter   |              | HS42/003        | HS42/003        |                 |

## EXPLODED VIEW HSR42/45/48 CARB

*Parts Breakdown for New Carburetors using Stock Cables*

| No.  | Part No.                | DESCRIPTION                  |
|------|-------------------------|------------------------------|
| 1.   | C50-0110-B              | Screws, Top Cover            |
| 2.   | CW2-0154-B              | Screws, Top Cover (2)        |
| 3.   | 770-38005               | Top Cover (H42/H50)          |
| 3a   | 444-374-004-            | Top Cover (H48)              |
| 4.   | TM42/004                | Quikjet, Top Cover           |
| 5.   | B332-108                | E-Ring, Jet Needle           |
| 6.   | <b>B28-63002</b>        | Washer, Jet Needle           |
| 7.   | J8-820H11-07            | Jet Needle (42)              |
| 7a   | J8-820P153-07           | Jet Needle (45/48)           |
| 8.   | TM42/003                | Lower, T.V. (H42/H50)        |
| 8a   | <b>JM42-004-1A-</b>     | Lower, T.V. (H48)            |
| 9.   | B401-156                | E-Ring, Link Lever           |
| 10.  | B401-110                | Packing, Link Lever          |
| 11.  | 834-29041               | Pin, Link Lever              |
| 12.  | TM42/04-3.0             | Throttle Valve - (Steel)     |
| 13.  | 739-13002               | Screws, Needle Retainer      |
| 14.  | TM42/116                | Clip, Needle Retainer        |
| 15.  | <b>JM42-015-</b>        | Sealing Ring, T.V. (H42/H50) |
| 15a  | <b>JM42-015-</b>        | Sealing Ring, T.V. (H48)     |
| 16.  | TM42/110                | Seat, Throttle Valve         |
| 17.  | 825-68306               | Polley, Cable Bracket        |
| 18.  | 83974                   | E-Ring, Cable Bracket        |
| 19.  | TM42/51                 | Bracket Ass'y. Cable         |
| 19a  | TM42/53                 | Bracket Ass'y. (Sportster)   |
| 20.  | B34-0620-B              | Bolt, Bracket                |
| 21.  | VM42/024                | Spacer, Bracket              |
| 22.  | TM42/38                 | Plate, Lock Tab              |
| 23.  | C29-0514-B              | Screw                        |
| 24.  | B40-12001               | Starter Rvd, Choke           |
| 25.  | VM41/041                | Spring, Starter Plunger      |
| 26.  | N109-102                | Center Plunger               |
| 27.  | <b>JM42-006-</b>        | Body (H42)                   |
| 27a  | <b>JM42-006-</b>        | Body (H48)                   |
| 28.  | 819-64329               | Seal, Spigot Body            |
| 29.  | <b>B33-13014-</b>       | Ring (Steel)                 |
| 30.  | TM42/43                 | Lower, A/P                   |
| 31.  | H105-010                | Pin, Throttle Lever          |
| 32.  | TM42/48                 | Lower, Throttle              |
| 33.  | M12744-006              | Spring, A/P                  |
| 34.  | MC-0316-B               | Screw, A/P                   |
| 35.  | TM42/47                 | Spring, A/P                  |
| 36.  | <b>JM42-006H91-B-</b>   | Mixing Body (H42/H50)        |
| 36a  | <b>JM42-006H91-B-</b>   | Mixing Body                  |
| 37.  | B3695                   | Packing, Shaft (Plastic)     |
| 38.  | TM42/34                 | Adjusting Screw, Throttle    |
| 39.  | B369265                 | Nut, Throttle Stop           |
| 40.  | TM42/98                 | O-Ring, A/P Screw            |
| 40a. | TM42/17                 | Solt                         |
| 41.  | B368/42                 | Plate, Lock Tab              |
| 42.  | TM42/46                 | Pin, Return Lever            |
| 43.  | <b>B3694169-</b>        | Lower, Return                |
| 44.  | H3-04                   | Adjusting Screw, Throttle    |
| 45.  | TM42/19                 | Nut, Throttle Stop           |
| 46.  | 730-15012               | Spring, Throttle Return      |
| 47.  | TM42/15                 | Shaft, Throttle              |
| 48.  | C29-0110                | Plate, Fuel Joint Retainer   |
| 49.  | B34-26014               | Screw, Fuel Joint            |
| 50.  | H133-208                | Screw, Pilot Air             |
| 51.  | VM122008                | Spring, Pilot Air            |
| 52.  | H133-037                | Washer, Pilot Air            |
| 53.  | TM42/27                 | O-Ring, Pilot Air            |
| 54.  | KY18                    | Fuel Joint                   |
| 55.  | B368/366                | O-Ring, Fuel Joint           |
| 56.  | VM22138                 | Packing, Idle Adjuster       |
| 57.  | 730-09018               | Washer, Idle Adjuster        |
| 58.  | B25-15001               | Spring, Idle Adjuster        |
| 59.  | TM42/32                 | Ring, Idle Adjuster          |
| 59a  | B90-605-065             | Idle Adjuster (Long)         |
| 60.  | B33-3097                | Idle Adjuster (Short)        |
| 61.  | 784-430000-H4           | Air Jet (Blank)              |
| 62.  | TM42/11-70              | Needle JH (723)              |
| 63.  | <b>HT24-003</b>         | Needle, Accel Pump           |
| 64.  | V1620488-28             | O-Ring, A/P                  |
| 65.  | <b>JM42-012-</b>        | Pilot Jet                    |
| 65a  | <b>JM42-012-1A-</b>     | Extender, Main Jet (42)      |
| 66.  | <b>JM42-012-1A-</b>     | Extender, Main Jet (48)      |
| 66.  | N100-604-046            | Main Jet                     |
| 67.  | <b>B34-33003</b>        | O-Ring, N.V.                 |
| 68.  | VM13218                 | Screws, N.V. Retainer        |
| 69.  | <b>785-27901-4.2</b>    | Needle Valve Assy (42)       |
| 70.  | <b>785-27903-1A-4.8</b> | Needle Valve Assy (48)       |
| 71.  | B39-32027               | Float Assy                   |
| 71.  | BV729/22                | Pin, Float                   |
| 72.  | C29-0410                | Screw, Float Pin             |
| 73.  | 819-64426               | Packing, Float Seal          |
| 74.  | TM42/65                 | Float, Chamber Body          |
| 75.  | H122-008                | Hose, Diaphragm              |
| 76.  | VM28/254                | O-Ring, Drain Plug           |
| 77.  | TM32/41                 | Drain Plug (H42)             |
| 77a  | <b>JM32-014-B-</b>      | Drain Plug (H48)             |
| 78.  | C29-0412-B              | Screw, Float Seal (short)    |
| 79.  | TM36/44-1A              | Rod, A/P                     |
| 80.  | <b>TM36/64</b>          | Boot, A/P Rod                |
| 81.  | TM36/65                 | Plunger, A/P                 |
| 82.  | VM145C/13/03            | Spring, A/P                  |
| 83.  | N108-0003               | Rubber Cap, Purge Port       |

**Rebuild Kit:**  
**HSR42/45: KHS-016**  
**HSR48: KHS-031**  
 Part numbers in bold type  
 are included in the rebuild kits.

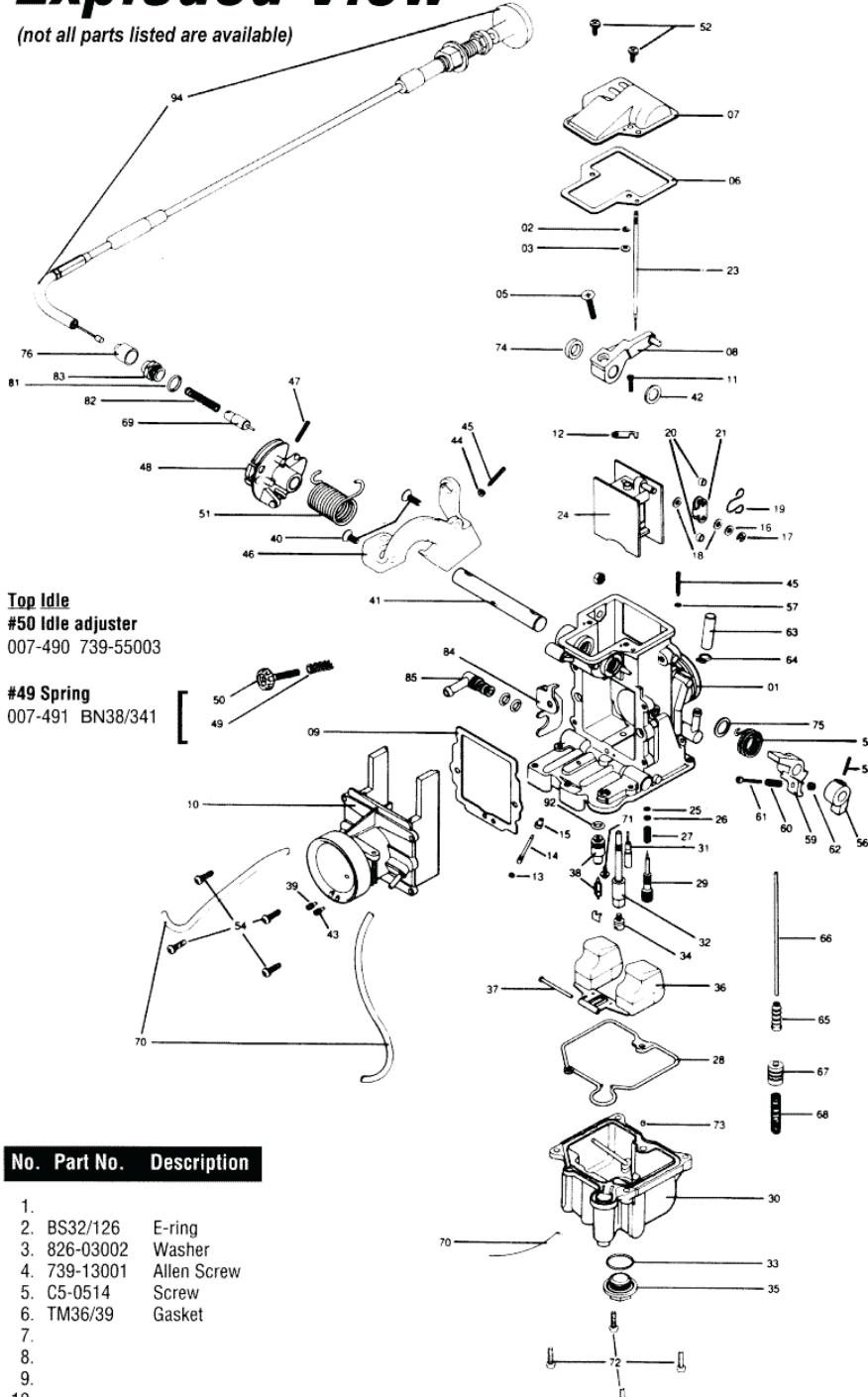


**NOTE:**  
 Part numbers with  
 lines through them  
 are not available.

# MIKUNI HS40 & TM36-68 & TM40-6

## Exploded View

(not all parts listed are available)



### No. Part No. Description

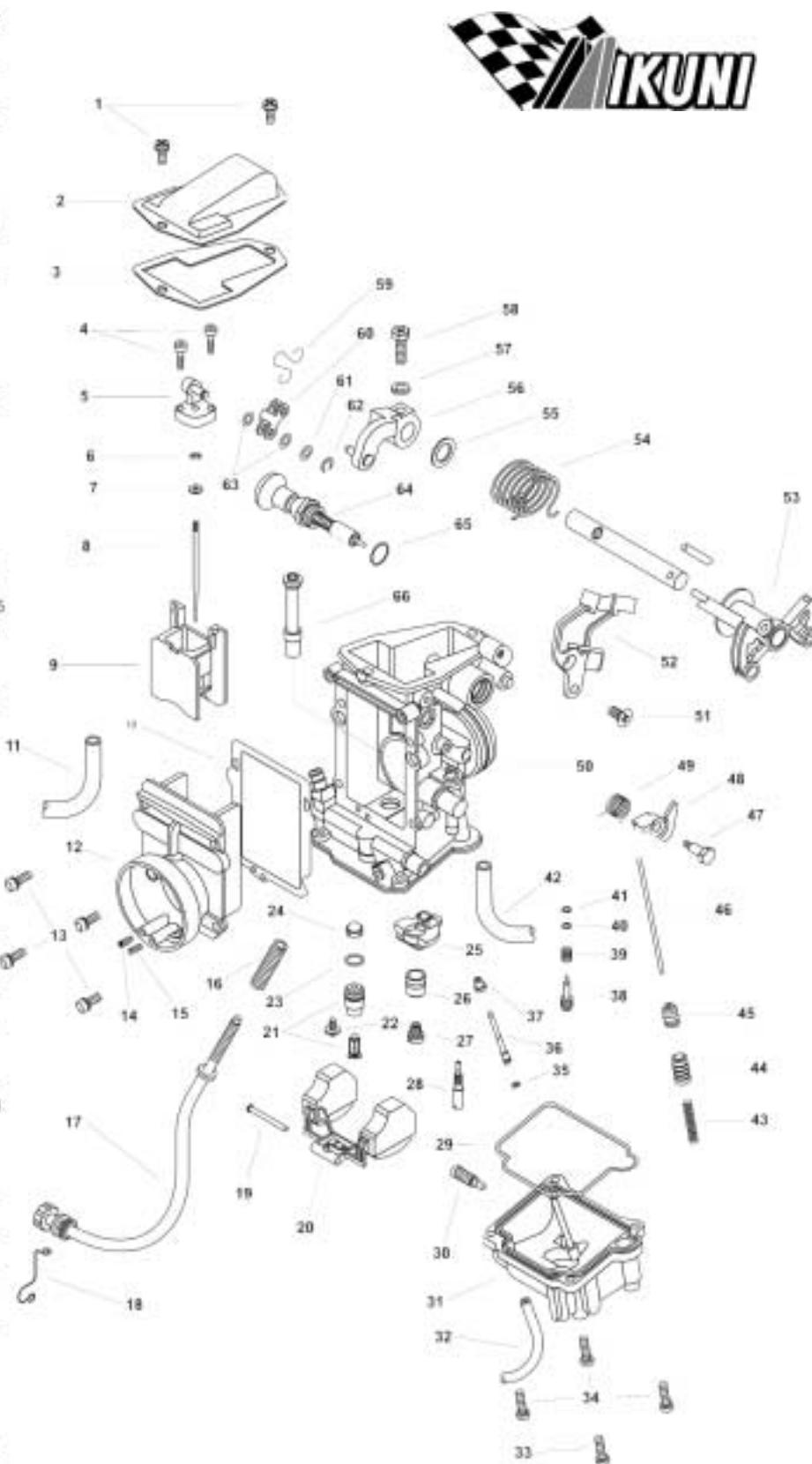
- 1.
2. BS32/126 E-ring
3. 826-03002 Washer
4. 739-13001 Allen Screw
5. C5-0514 Screw
6. TM36/39 Gasket
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
13. N124.063 O-ring, Nozzle
14. TM36/43 Pump, Nozzle

### No. Part No. Description

- |   |  |
|---|--|
| 9. TM36/42 Funnel Gasket                    |  |
| 15. TM29/14 Plug, Nozzle                    |  |
| 16. M10/56 Washer                           |  |
| 17. BSW20/70 E-ring                         |  |
| 18. B401/10 Packing                         |  |
| 22. TM36/54 Conn. Plate                     |  |
| 23. 9DJY01 Jet Needle                       |  |
| 24. TM40/81 Throttle Valve                  |  |
| 25. N133.037 O-ring                         |  |
| 26. VM12/33 Washer                          |  |
| 27. N133.206 Spring                         |  |
| 28. 619-94021 O-ring, Float Bowl            |  |
| 29. 604-26003 Screw                         |  |
| 30. TM40/12 F.C.B.                          |  |
| 31. VM28/486 Pilot Jet                      |  |
| 32. 784-13002 Needle Jet                    |  |
| 33. VM28/254 O-ring                         |  |
| 34. N100/604 Main Jet                       |  |
| 35. TM32/41 Drain Plug                      |  |
| 36. 659-32011 Float Ass'y.                  |  |
| 37. VM30/160 Pin, float                     |  |
| 38. 786-36007 3.8 N.Valve Ass'y             |  |
| 39. BS30/97 Main Air Jet (plugged)          |  |
| 40. C5-0512-B Screw                         |  |
| 41.   |  |
| 42.   |  |
| 43. BS30/97 Pilot Air Jet                   |  |
| 44. N2-03-B Hex Nut                         |  |
| 45. TM36/48 Adj. Screw                      |  |
| 46. TM40/14 Bracket                         |  |
| 47. N138.019 Pin                            |  |
| 48. TM40/23 Lever Ass'y.                    |  |
| 49. N150.025 Spring Idle Adjust             |  |
| 50. TM40/91 Adjuster, idle (Side Idle Only) |  |
| 51.   |  |
| 52. CW2-0408 Screw                          |  |
| 54. VM38/133 Screw                          |  |
| 55. BN38/43 Pin                             |  |
| 56. TM36/16 Lever                           |  |
| 57. B30/205 O-ring                          |  |
| 58.   |  |
| 59. TM36/17 Lever                           |  |
| 60. M12F/46a Spring                         |  |
| 61. MC-0316 Screw                           |  |
| 62. N3-03-B Hex Nut                         |  |
| 63. N148.013 Cap                            |  |
| 64.   |  |
| 65. TM36/64 Cap                             |  |
| 66. TM36/44 Rod                             |  |
| 67. TM36/60 Plunger                         |  |
| 68. VM14SC13/89 Spring                      |  |
| 69. VM38/148 Plunger                        |  |
| 70. 888-23026 Hose                          |  |
| 71. VM13/216 Screw                          |  |
| 72. C2-0412-B Screw                         |  |
| 73. VM17/1002 Stir, Jet                     |  |
| 74.   |  |
| 75.   |  |
| 76. VM12/43 Cap, Starter Cable              |  |
| 81. N138.198 O-ring                         |  |
| 82. VM16/42 Spring Starter                  |  |
| 83. 640-12001 Guide Holder                  |  |
| 84.   |  |
| 85. TM40/27 Inlet, Fuel                     |  |
| 92. KV/10 O-ring N. Valve                   |  |
| 94. 990-662-001 Choke Cable Ass'y.          |  |
| 94B. TM40/07 Choke Knob                     |  |

## TM33 SERIES CARBS

| No. | Description               | Part Number    |
|-----|---------------------------|----------------|
| 1.  | Screw, Top Cover          | CW2-0410       |
| 2.  | Top Cover                 | TM29/16e       |
| 3.  | Gasket, Top Cover         | TM29/17        |
| 4.  | Screw, Joint Assy         | 700-10001      |
| 5.  | Joint Assy                | TM29/71        |
| 6.  | E-Ring                    | VM20/369       |
| 7.  | Packing                   | VM26/315       |
| 8.  | Jet Needle                | J8-5FP96-3     |
| 9.  | Throttle Valve            | 832-38007-1.5  |
| 10. | Gasket, Air Funnel        | TM29/62        |
| 11. | Hose, Vent                | VM34/105       |
| 12. | Air Funnel                | TM33/32        |
| 13. | Screw, Air Funnel         | VM30/133       |
| 14. | Pilot Air Screw           | BS30/97-1.1    |
| 15. | Main Air Jet              | BS30/97-0.7    |
| 16. | Spring, Idle Adjuster     | 730-07006      |
| 17. | Idle Adjuster             | TM33/38        |
| 18. | Clip, Idle Adjuster       | N160-168       |
| 19. | Pin, Float                | VM30/160       |
| 20. | Float Assy                | 859-34003      |
| 21. | Needle Valve Assy         | N133.200-1.8   |
| 22. | Screw, Valve Holder       | VM13/216       |
| 23. | O-Ring, Needle Valve      | KV10           |
| 24. | Filter, Needle Valve      | VM18/233       |
| 25. | Ring (nylon), Main Jet    | TM33/36        |
| 26. | Ring (brass), Main Jet    | VM18/165       |
| 27. | Main Jet                  | N100.604-127.5 |
| 28. | Pilot Jet                 | VM28/486-37.5  |
| 29. | O-Ring, Float Bowl        | 618-94012      |
| 30. | Drain Screw, Float Bowl   | N133.383       |
| 31. | Float Bowl                | TM33/77        |
| 32. | Hose, Overflow            | 888-23042-1F   |
| 33. | Screw (long), Float Bowl  | C2-0416        |
| 34. | Screw (short), Float Bowl | C2-0414        |
| 35. | O-Ring, A/P Nozzle        | N123.083       |
| 36. | A/P Nozzle                | TM29/24        |
| 37. | Plug, A/P Nozzle          | TM29/14        |
| 38. | Pilot Screw               | N138.192       |
| 39. | Spring, Pilot Screw       | N138.187       |
| 40. | Washer, Pilot Screw       | VM12/33        |
| 41. | O-Ring, Pilot Screw       | N133.037       |
| 42. | Hose, Vent                | 888-25020-4E   |
| 43. | Spring, A/P Plunger       | 730-04003      |
| 44. | A/P Plunger               | TM29/18        |
| 45. | Cap, A/P Rod              | N160-048       |
| 46. | Rod, A/P                  | TM33/48        |
| 47. | Bolt, A/P Lever           | B30/397        |
| 48. | Lever, A/P                | VM38/212       |
| 49. | Spring, A/P Lever         | TM33/47        |
| 50. | Main Body                 | TM33ee00001-0  |
| 51. | Screw, Throttle Bracket   | C5-0510        |
| 52. | Throttle Bracket          | TM33/33        |
| 53. | Bellcrank                 | TM33/44        |
| 54. | Spring, Throttle Return   | TM34/21        |
| 55. | Packing, Throttle Shaft   | B38/95         |
| 56. | Lever, Throttle           | VM13/185       |
| 57. | Washer, Throttle Lever    | W4-05          |
| 58. | Bolt, Throttle Lever      | VM38/230       |
| 59. | Spring, Linkage Lever     | VM33/49        |
| 60. | Plate, Linkage Lever      | VM33/45        |
| 61. | Washer, Linkage Lever     | M10/56         |
| 62. | E-Ring, Linkage Lever     | BSW28/70       |
| 63. | Packing, Linkage Lever    | B40U/10        |
| 64. | Choke Assy                | TM33/49        |
| 65. | O-Ring, Choke Assy        | N138.198       |
| 66. | Needle Jet                | 784-24111-P-8  |





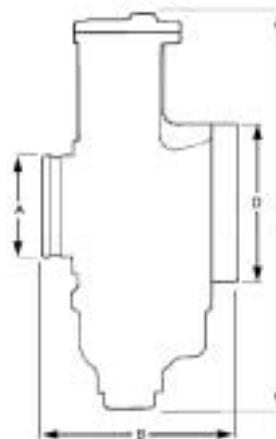


## TM SERIES CARBURETORS



### Mikuni Flat Slide Carburetor

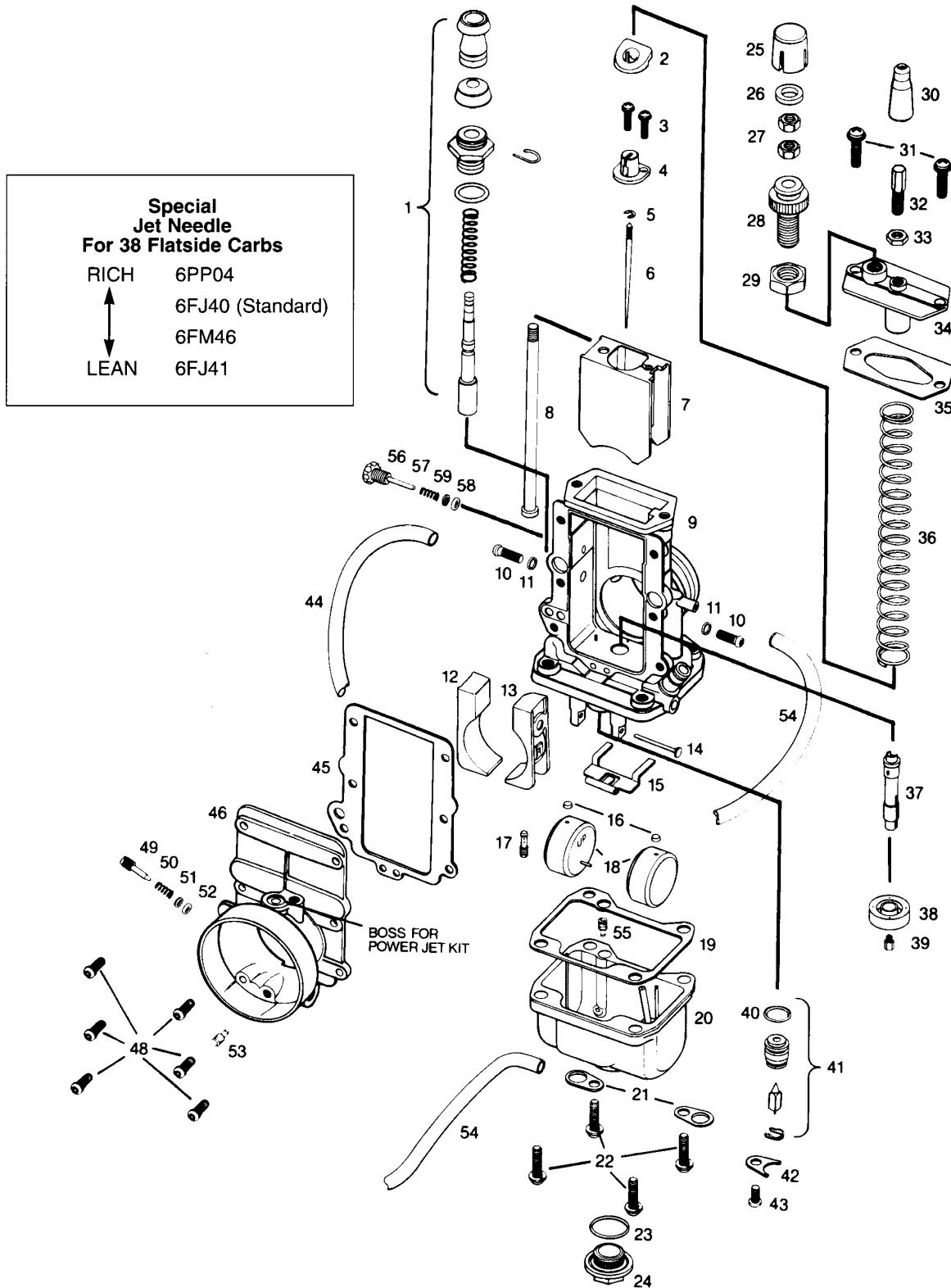
- Provide significant performance improvements over older round slide carburetors.
- Air flows faster and smoother through the TM Series venturi due to the flat slide design and the jet blocks which help create smooth bore effect.
- The high velocity of the air flow means a stronger vacuum at the needle jet providing more precise metering and better throttle response.



| Model Number     | VM28-418 | TM32-1 | TM34-2 | TM36-68 | TM33-8012 | TM36-2 | TM38 86 | TM38 102 | TM38 85 | TM40-6 |
|------------------|----------|--------|--------|---------|-----------|--------|---------|----------|---------|--------|
| Dimension A (mm) | 33       | 40     | 42     | 40      |           | 43     |         | 47       | 44      |        |
| B                | 82       | 83     | 100    | 93      |           |        | 100     |          | 100     |        |
| C                | 135      | 160    | 176    | 160     |           |        | 170     |          | 165     |        |
| D                | 44       | 58     | 54     | 50      |           |        | 62      |          | 55      |        |
| Total Width:     | 76       | 78     |        | 105     |           |        | 75      |          |         |        |

| Carb No.   | Size (MM) | Main Jet  | Pilot Jet | Needle Jet    | Jet Needle | Throttle Valve | Air Jet |
|------------|-----------|-----------|-----------|---------------|------------|----------------|---------|
|            |           | 4/042-    | VM22/210- |               | J8-        |                |         |
| VM28-418   | 28        | 180       | 15        | 175 P-8       | 5DP39      | 832-33001 2.5  | None    |
| TM32-1     | 32        | 250       | 45        | 389 Q-2       | 5FP17      | 832-39012 4.0  | None    |
| TM34-2     | 34        | 280       | 50        | 389 Q-2       | 5FP17      | 832-39012 4.0  | None    |
| TM36-2     | 36        | 280       | 50        | 389 Q-6       | 6FJ40      | 832-43002 4.0  | None    |
| TM38-85    | 38        | 230       | 22.5      | 389 Q-2       | 6FJ-41     | 832-43011-4.0  | None    |
| TM38-86    | 38        | 230       | 22.5      | 389 Q-3       | 6FJ41      | 832-43011-4.0  | None    |
| TM38-102   | 38        | 340       | 25        | 389 Q-2       | 6FJ40      | 832-43002-4.0  | 2.5     |
|            |           | N100/604- | VM28/486- |               | J8-        |                |         |
| TM33-8012  | 33        | 127.5     | 37.5      | 784-24111 P-8 | 5FP96      | 832-38007-1.5  | 0.7     |
| TM36-68.so | 36        | 130       | 12.5      | 784-13002 P-8 | 9DZH6-50   | N/A            | 1.0     |
| TM40-6     | 40        | 165       | 17.5      | 784-13002 Y-6 | 9DDY01     | N/A            | 1.1     |

## TM FLAT SLIDE CARBURETORS





## TM FLAT SLIDE CARBURETORS - TM SERIES PART LIST

| Description                 | VM28-418         | TM32-1             | TM34-2             | TM36-2             | TM38-1&3           | TM38-85&86         |
|-----------------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1. Complete Starter Assy    | VM26/116 (LT)    | VM29/47            | VM29/47            | VM29/47            | VM29/47            | VM29/47            |
| 2. Nylon Ring               | VM26/1046        | VM26/1046          | VM26/1046          | VM38/153           | VM38/153           | VM38/153           |
| 3. Screw w/Lockwasher       | CW2=310          | CW2=310            | CW2=310            | CW2=310            | CW2=310            | CW2=310            |
| 4. Cable Connector          | NLA              | NLA                | NLA                | VM38/152           | VM38/152           | VM38/152           |
| 5. E-Ring                   | VM20/369         | VM20/369           | VM20/369           | VM20/369           | VM20/369           | VM20/369           |
| 6. JET NEEDLE               | J8-5DP39         | J8-5FP17           | J8-5FP17           | J8-6F J40          | J8-6F J40          | J8-6F J41          |
| 7. Throttle Valve           | NLA              | 832-39012-4.0      | 832-39012-4.0      | 832-43002-4.0      | 832-43002-4.0      | 832-43011-4.0      |
| 8. Idle Rod                 | N/A              | N/A                | N/A                | VM38/159           | VM38/159           | N/A                |
| 9. Mixing Chamber Body      | NLA              | NLA                | NLA                | NLA                | NLA                | NLA                |
| 10. Screw, Jet Block        | VM38/132         | VM38/132           | VM38/132           | VM38/132           | VM38/132           | VM38/132           |
| 11. Washer (Alum)           | VM34/274         | VM34/274           | VM34/274           | VM34/274           | VM34/274           | VM34/274           |
| 12. Jet Block, Left         | NLA              | NLA                | NLA                | NLA                | VM38/144           | TM38/08            |
| 13. Jet Block, Right        | NLA              | NLA                | NLA                | NLA                | VM38/145           | TM38/09            |
| 14. Float Pin               | VM30/160         | VM30/160           | VM30/160           | VM30/160           | VM30/160           | VM30/160           |
| 15. Float Arm               | N/A              | VM36/15            | VM36/15            | VM36/15            | VM36/15            | VM36/15            |
| 16. Cap, Float Guide Pin    | VM26/42          | VM26/42            | VM26/42            | VM26/42            | VM26/42            | N/A                |
| 17. PILOT JET               | VM22/210-15      | VM22/210-45        | VM22/210-50        | VM22/210-50        | VM22/210-356       | VM22/210-22.5      |
| 18. Float (Assy)            | VM28/694         | VM24/236           | VM24/236           | VM24/236           | VM24/236           | 859-52020          |
| 19. Gasket, Float Chamber   | NLA              | VM34/374           | VM34/374           | VM34/374           | VM34/374           | VM34/374           |
| 20. Float Chamber Assy      | NLA              | TM32/02-60         | TM32/02-80         | TM32/02-100        | TM32/02-100        | TM38/138           |
| 21. Plate, Hose Retaining   | NLA              | NLA                | NLA                | NLA                | NLA                | NLA                |
| 22. Screw w/Lockwasher      | CW2=0416         | CW2=0516           | CW2=0516           | CW2=0518           | CW2=0518           | CW2=0516           |
| 23. O-Ring                  | VM26/227         | VM28/254           | VM28/254           | VM28/254           | VM28/254           | VM28/254           |
| 24. Drain Plug              | VM28/817         | VM28/253           | VM28/253           | VM28/253           | VM28/253           | VM28/253           |
| 25. Cap, Idle Adjuster      | N/A              | N/A                | N/A                | VM35/40            | VM35/40            | N/A                |
| 26. Packing (Rubber)        | N/A              | N/A                | N/A                | N138.077           | N138.077           | N/A                |
| 27. Nut                     | N/A              | N/A                | N/A                | N2=04              | N2=04              | N/A                |
| 28. Idle Adjuster           | N/A              | N/A                | N/A                | 603-68001          | 603-68001          | N/A                |
| 29. Nut                     | N/A              | N/A                | N/A                | BDC36/35           | BD36/35            | N/A                |
| 30. Rubber Cap              | VM26/46          | VM18/228           | VM18/228           | VM18/228           | VM18/228           | N/A                |
| 31. Screw w/Lockwasher      | CW2=0412         | CW2=0412           | CW2=0412           | CW2=0412           | CW2=0412           | CW2=0412           |
| 32. Cable Adjuster          | M18F/43a         | VM36/83            | VM36/83            | VM36/83            | VM36/83            | VM36/83            |
| 33. LockNut                 | B30/247          | B30/247            | B30/247            | B30/247            | B30/247            | B30/247            |
| 34. Mixing Chamber Top      | NLA              | NLA                | NLA                | 776-19002          | 776-19002          | 776-19001          |
| 35. Gasket, Top             | VM28/1045        | NLA                | NLA                | VM38/127           | VM38/127           | VM38/127           |
| 36. Throttle Valve Spring   | 730-15001        | NLA                | NLA                | 730-16003          | 730-16003          | 730-16003          |
| 37. NEEDLE JET              | VM30/46-P-8(175) | 785-24001-Q-2(389) | 785-24001-Q-2(389) | 785-24001-Q-2(389) | 785-24001-Q-2(389) | 785-24001-Q-2(389) |
| 38. Ring, Main Jet Assy     | VM28/429         | VM24/622           | VM24/622           | VM24/622           | VM24/622           | VM24/622           |
| 39. MAIN JET                | 4/042-180        | 4/042-250          | 4/042-280          | 4/042-280          | 4/042-290          | 4/042-230          |
| 40. VM24/559                | KV/10            | KV/10              | KV/10              | KV/10              | KV/10              | KV/10              |
| 41. Needle Valve            | VM24/557-2.5     | 786-46001-3.3      | 786-46001-3.3      | 786-46001-3.3      | 786-46001-3.5      | 786-46001-3.5      |
| 42. Plate, Needle Valve     | VM24/560         | VM24/560           | VM24/560           | VM24/560           | VM24/560           | VM38/29            |
| 43. Screw                   | C2=0406          | C2=0406            | C2=0406            | C2=0406            | C2=0406            | C2=0406            |
| 44. Vent Hose               | NLA              | NLA                | NLA                | NLA                | NLA                | NLA                |
| 45. Gasket, Front Cover     | VM28/1044        | NLA                | NLA                | NLA                | NLA                | VM38/126           |
| 46. Front Body, Air Intake  | NLA              | NLA                | NLA                | NLA                | NLA                | NLA                |
| 47. Bolt                    | N/A              | N/A                | N/A                | N/A                | BV15/27            | N/A                |
| 48. Screw                   | VM38/133-B       | VM38/133-B         | VM38/133-B         | VM38/133-B         | VM38/133-B         | VM38/133-B         |
| 49. Air Screw, Pilot        | VM20/584         | VM24/622           | VM24/622           | VM24/622           | VM24/622           | VM24/622           |
| 50. Spring, Pilot Air Screw | M12F/46a         | M12F/46a           | M12F/46a           | M12F/46a           | M12F/46a           | M12F/46a           |
| 51. Washer, Pilot Air Screw | N/A              | VM12/33            | VM12/33            | VM12/33            | VM12/33            | VM12/33            |
| 52. O-Ring, Pilot Air Screw | N/A              | N133.037           | N133.037           | N133.037           | N133.037           | N133.037           |
| 53. MAIN AIR JET            | BS30/97-1.8      | 2.5 On Body        |
| 54. Overflow Hose           | NLA              | NLA                | NLA                | NLA                | NLA                | VM24/328           |
| 55. Starter Jet*            | VM17/1002-15     | VM17/1002-60       | VM17/1002-80       | VM17/1002-80       | VM17/1002-100      | VM17/1002-40       |
| 56. Idle Stop Screw         | 603-27002        | 603-16003          | 603-16003          | N/A                | N/A                | 603-16003          |
| 57. Spring Idle Screw       | VM15/112         | VM24/556           | VM24/556           | N/A                | N/A                | VM24/556           |
| 58. O-Ring                  | VM14/75          | BV32/04            | BV32/04            | N/A                | N/A                | BV32/04            |
| 59. Washer                  | VM14/87          | N/A                | N/A                | N/A                | N/A                | N/A                |

Starter Jet available in size 15 thru 120; LT - Lever Type; N/A - Not Applicable NLA - No Longer Available

## TMX SERIES CARBURETORS

- Intended for 2-stroke engines.
- Features a radial flat slide design working in a smooth bore venturi.
- Provides improved throttle response along with a wider and stronger engine power band.
- A lightweight and compact body design offers easy maintenance and tuning features.
- A float system with independently moving floats.
- Features an easy-access main jet enclosed in a baffle chamber.
- Performs smoothly without hesitation across the roughest terrain and under extreme lean angles and cornering forces.

**Complete Kit Includes:** Air Boot Adapter, Inner Throttle Cable Wire, Cable End, Main Jets, Pilot Jets, Jet Needle, Clamps, Hose, Instructions



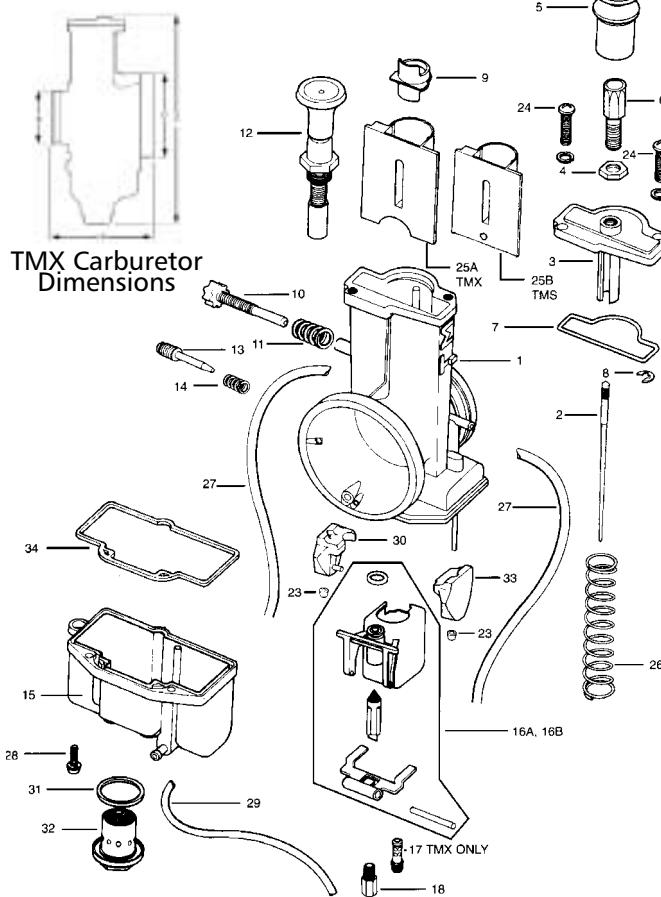
| Carb #       | Main Jet                   | Pilot Jet | Jet Needle | Throttle Valve |
|--------------|----------------------------|-----------|------------|----------------|
|              | 4/042-                     | VM22/210- | J8-        | 832-014-       |
| TMX35-1      | 350                        | 20        | 6EN11-53   | 6.0            |
| TMX38-1      | 370                        | 20        | 6EJ12-55   | 3.5            |
| TMS38-H125   | Fits Honda CR125 '88-92    |           |            |                |
| TMS38-H12593 | Fits Honda CR125 '93+      |           |            |                |
| TMS38-H250   | Fits Honda CR250 '88-91    |           |            |                |
| TMS38-K125   | Fits Kawasaki KX125 '88-91 |           |            |                |
| TMS38-S125   | Fits Suzuki RM125 '88-91   |           |            |                |
| TMS38-Y125   | Fits Yamaha YZ125 '88-91   |           |            |                |
| TMX38-101    | 340                        | 25        | 6EJ12-57   | 4.0            |

| Dimensions |    |    |     |    |
|------------|----|----|-----|----|
|            | A  | B  | C   | D  |
| TMX35      | 40 | 76 | 164 | 62 |
| TMX38      | 44 | 76 | 164 | 62 |

### TMX Series Part List

| NO.  | DESCRIPTION                 | PART NUMBER           |
|------|-----------------------------|-----------------------|
| 1.   | Mixing Body Carb            | NLA                   |
| 2.   | Jet Needle                  | J8 -See Page 13-25    |
| 3.   | Cover, Carb Top             | 776-19014             |
| 4.   | Lock Nut, Adjuster          | B30/247               |
| 5.   | Cap, Rubber                 | VM34/282              |
| 6.   | Adjuster, Cable             | VM30/77               |
| 7.   | O-Ring, Top Cover           | 616-93009             |
| 8.   | E-Ring, Needle Clip         | BS32/126              |
| 9.   | Ring, Retaining             | TM38/54               |
| 10.  | Adjuster, Idle Stop         | 603-25008             |
| 11.  | Spring, Idle Adjust         | N110209               |
| 12.  | Plunger, Starter Assy       | TM38/57               |
| 13.  | Screw, Air Adjuster         | 603-36002             |
| 14.  | Spring, Air Screw           | VM15/112              |
| 15.  | Chamber, Float Bowl         | TM38/48               |
| 16A. | Valve Seat, Needle Assembly | 820-26002-3.5         |
| 16B. | Valve Seat, Needle Assembly | 820-26002-1.8A        |
| 17.  | Pilot Jet                   | VM22/210 -See Tuning  |
| 18.  | Main Jet                    | 4/042 -See Tuning     |
| 23.  | Cap, Float Retainer         | VM26/42               |
| 24.  | Screw, Top Cover            | CW2=0412              |
| 25A. | Throttle Valve (TMX)        | 832-014 -See Page 219 |
| 25B. | Throttle Valve (TMS)        | 832-017 -See Page 219 |
| 26.  | Spring T.V.                 | 730-13019             |
| 27.  | Hose, Vent                  | 888-24011             |
| 28.  | Screw, Float Bowl           | CW2=0308              |
| 29.  | Hose, Overflow              | 888-23022             |
| 30.  | Float, Left Side            | 859-52021             |
| 31.  | O-Ring, Drain Plug          | BN042-64              |
| 32.  | Drain Plug                  | TM38/44               |
| 33.  | Float, Right Side           | 859-52020             |
| 34.  | Gasket, Float Bowl          | TM38/52               |

NLA - No Longer Available



# MIKUNI RACING CARBURETORS - RS SERIES

## STANDARD TUNING SPECIFICATIONS

| MIKUNI KIT NUMBER | APPLICATION *GENERAL)   | CARB SPACING (Throttle Shaft No.) A-B-C | SPIGOT (O.D.) MM | MAIN JET (N100.004)      | *JET NEEDLE (JB-1) (CLIP POS.) | NEEDLE JET #560 (754-13002) | PILOT JET (VM28/486) | PILOT SCREW (TURNS) |
|-------------------|---|---|------------------|--------------------------|--------------------------------|-----------------------------|----------------------|---------------------|
| RS34-D21-K        | GSX-600 '88<br>GSXR 750 to 1990<br>SUZ GS 750 ALL.<br>KAW KZ 750      | 77-93-77<br>(700-17011)                 | 40               | 115                      | 802H1<br>(-3)                  | P-4                         | 17.5                 | 1/4-1/2             |
| RS36-D3-K         | GSXR 750 to 1990<br>GSXR 1100 to 1990<br>GS 1000-1150<br>KZ 1000-1100 | 77-93-77<br>(700-17011)                 | 42               | 120<br>120<br>130<br>130 | 802H1<br>(-3)                  | P-4                         | 17.5                 | 1/4-1/2             |
| RS38-D19-K        | GSXR 750 to 1990<br>GSXR 1100, GS 1000-1150<br>KZ 1000-1100           | 77-93-77<br>(700-17011)                 | 42               | 135<br>135<br>135        | 80CHY3<br>1-2                  | Y-6                         | 17.5                 | 1/4-1/2             |
| RS40-D1-K         | GSXR '90, GS, KZ RACE   | 77-93-77<br>(700-17011)                 | 44               | 140                      | 80CHY3<br>1-3                  | Y-6                         | 17.5                 | 1/4-1/2             |

KIT PREFIX NUMBER DENOTES CARB VENTURI SIZE IN MILLIMETERS. IE. RS36=36MM BORE

\*NOTE: These are guidelines only, other applications may be available contact your Mikuni Distributor specifications are subject to change.

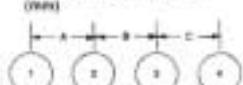


### PARTS STAMPING

This marking is your quality assurance guarantee.  
**DO NOT ACCEPT SUBSTITUTES.**

\*NOTE: RS34/36  
MAY USE 802H65  
RS36/40 MAY USE:  
80CHY10

### CARBURETOR SPACING (MM)



## TYPICAL EXPLODED VIEW

### RS-34-36-38-40

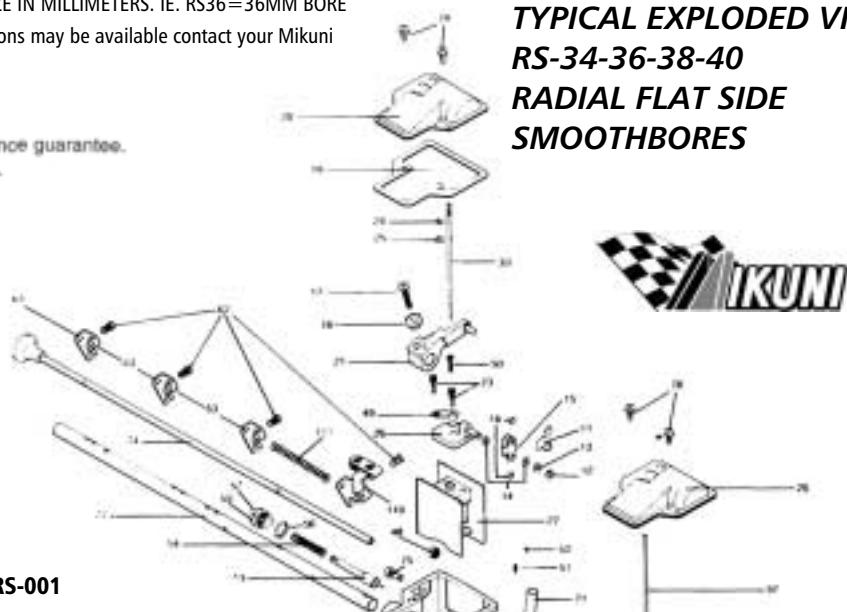
### RADIAL FLAT SIDE SMOOTHBORES



### Mikuni Push/Pull Throttle Assembly KRS-001

Throttle assembly includes twist throttle assembly and both throttle cables for the RS series carbs.

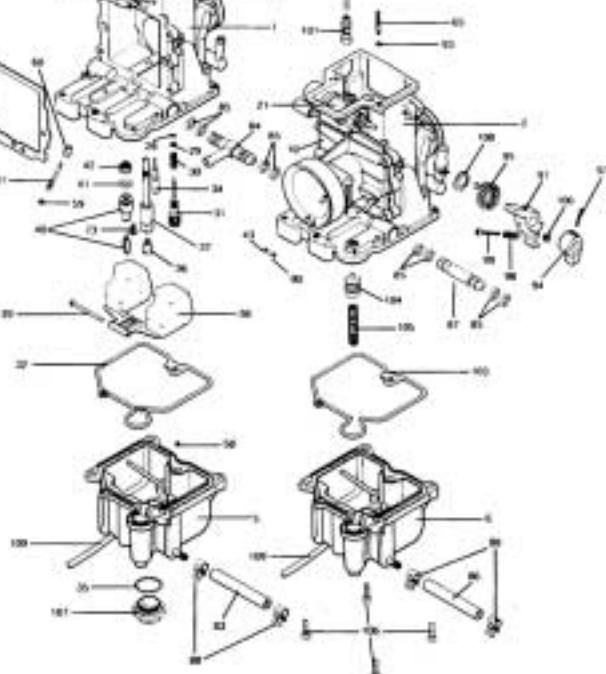
TCI Part# 708-410



### Mikuni Velocity Stacks

Velocity stacks improve the airflow into the carburetors to increase induction efficiency and increase horsepower on racing engines where air filters are not required.

50mm Mikuni Velocity Stacks    TCI Part# KRS-003



## MIKUNI RACING CARBURETORS

| No. | Description                  | Part Number  | No.  | Description              | Part |
|-----|------------------------------|--------------|------|--------------------------|------|
| 17  | SCREW, SYNCH. LOCK           | CS-0518      | 39   | PIN, FLOAT               | N    |
| 18  | RING, SYNCH. ADJUST          | TM36/06      | 40   | NEEDLE VALVE ASSY        | N    |
| 19  | GASKET, TOP COVER            | TM36/38      | 41   | O-RING, NEEDLE VALVE     | K    |
| 20  | TOP COVER, CARB.             | TM36/69      | 42   | FILTER, NEEDLE VALVE     | V    |
| 21  | LEVER ASSY, T.V. #1-2-4      | TM36/54      | 43   | MAIN AIR JET (PLUGGED)   | B    |
| 22  | GASKET, A/FUNNEL             | TM36/42a     | 44   | SCREW, CRANK BRACKET     | C    |
| 23  | SCREW, 2.5 mm ALLEN          | 739-13001    | 45   | LEVER ASSY, T.V. #3 CARB | H    |
| 24A | E-RING, RS 32-34-36 NDLE     | VM20/369     | 46   | SCREW, LEVER LOCK        | G    |
| 24B | E-RING, RS 38-40 NDLE        | BS32/126     | 47   | PACKING, SHAFT           | H    |
| 25  | WASHER, NEEDLE CLIP          | VM26/315     | 48   | HEXAGON, LOCK NUT        | V    |
| 26  | CONNECTOR PLATE, T.V.        | TM36/54      | 49   | PLATE, NEEDLE RETAINER   | H    |
| 27A | VALVE, THROTTLE 32-34-36     | 832-42004    | 50   | SCREW, T.V. PLATE        | G    |
| 27B | VALVE, THROTTLE 38-40        | 832-42004-01 | 51   | SPRING, STARTER SHAFT    | B    |
| 28  | O-RING, FUEL SCREW           | NI33.037     | 52   | BALL, STARTER SHAFT      | B    |
| 29  | WASHER, FUEL SCREW           | VM12/33      | 53   | PLUNGER, STARTER         | H    |
| 30  | SPRING, FUEL SCREW           | NI33.206     | 54   | SPRING, STARTER          | V    |
| 31  | SCREW, PILOT FUEL            | 604-26003    | 55   | GUIDE HOLDER, STARTER    | H    |
| 32  | O-RING, F.C.B. #1-3-4        | 616-94020    | 56   | O-RING, STARTER          | N    |
| 33A | JET NEEDLE RS36 BEFORE 12/87 | JB-9CHY01    | 57   | CAP, STARTER             | H    |
| 33B | JET NEEDLE RS32-34-36        | JB-9DZH01    | 58   | STARTER JET              | V    |
| 33C | JET NEEDLE RS38-40           | JB-9CHY03    | 59   | O-RING, A/P NOZZLE       | N    |
| 34  | PILOT JET                    | VM28/486     | 60   | PLUG, A/P NOZZLE         | T    |
| 35  | O-RING, DRAIN PLUG           | VM28/254     | 61   | PUMP NOZZLE              | T    |
| 36  | MAIN JET                     | NI00-604     | 62   | SCREW, START BRACKET     | N    |
| 37  | NEEDLE JET-568               | 784-13002    | 63   | LEVER, STARTER SHAFT     | H    |
| 38  | FLOAT ASSY                   | 859-890++    | 64   | BRACKET, BELL CRANK      | H    |
|     |                              |              | 65   | ADJUST SCREW, A/P        | T    |
|     |                              |              | 66   | LEVER ASSY, BELL CRANK   | H    |
|     |                              |              | 67   | HEXAGON NUT, A/P         | H    |
|     |                              |              | 68   | PIN, THROTTLE BELL CRANK | N    |
|     |                              |              | 69   | ADJUSTER, IDLE           | H    |
|     |                              |              | 70   | SPRING, IDLE ADJUSTER    | N    |
|     |                              |              | 71   | CAP, VACUUM FITTING      | N    |
|     |                              |              | 72   | SPRING CLIP, VAC. FIT    | H    |
|     |                              |              | 73   | SCREW, NV HOLDER         | V    |
|     |                              |              | 74   | SHAFT ASSY, STARTER      | H    |
|     |                              |              | 75   | PAN HEAD MACHINE SCREW   | C    |
|     |                              |              | 76   | FLAT HEAD MACHINE SCREW  | G    |
|     |                              |              | 77A  | SHAFT, THROTTLE B/C #3   | T    |
|     |                              |              | 77B  | SHAFT, THROTTLE B/C #1   | T    |
|     |                              |              | 77C  | SHAFT, THROTTLE B/C #3   | T    |
|     |                              |              | 78   | SCREW, TOP COVER         | C    |
|     |                              |              | 79   | SPRING, THRTL. RTRN.     | H    |
|     |                              |              | 80   | LEVER, RTN. SPRNG        | H    |
|     |                              |              | 81   | CAP, SHAFT END           | H    |
|     |                              |              | 82   | SCREW, AIR FUNNEL        | H    |
|     |                              |              | 83   | HOSE, FUEL CONNECT       | H    |
|     |                              |              | 84   | INLET, FUEL "T"          | H    |
|     |                              |              | 85   | O-RING, FUEL JOINT       | G    |
|     |                              |              | 86   | HOSE, A/P FUEL           | H    |
|     |                              |              | 87   | JOINT, FUEL              | E1   |
|     |                              |              | 88   | CLIP, FUEL HOSE          | C    |
|     |                              |              | 89   | SCREW, BRACKET           | C    |
|     |                              |              | 90   | PILOT AIR JET            | B    |
|     |                              |              | 91   | LEVER, A/PUMP            | H    |
|     |                              |              | 92   | PIN, A/P LOCATE          | H    |
|     |                              |              | 93   | O-RING, A/P ADJ.         | B    |
|     |                              |              | 94   | LEVER, A/PUMP            | H    |
|     |                              |              | 95   | SPRING, A/PUMP           | H    |
|     |                              |              | 96   | PLATE, TOP BRACKET       | H    |
|     |                              |              | 97   | ROD, A/PUMP              | T    |
|     |                              |              | 98   | SPRING, A/P ADJ.         | M    |
|     |                              |              | 99   | SCREW, A/P ADJ.          | M    |
|     |                              |              | 100  | HEXAGON NUT, A/P ADJ.    | N    |
|     |                              |              | 101  | CAP, A/P RUBBER          | T    |
|     |                              |              | 102  | PLATE, LOWER BRACKET     | H    |
|     |                              |              | 103  | O-RING, F.C.B. A/P       | H    |
|     |                              |              | 104A | PLUNGER, A/PUMP 8mm      | T    |
|     |                              |              | 104B | PLUNGER, A/PUMP 12mm     | T    |
|     |                              |              | 105  | SPRING, A/P 12mm         | V    |
|     |                              |              | 106  | SCREW, FLOAT BOWL        | C    |
|     |                              |              | 107  | PLUG, DRAIN              | V    |
|     |                              |              | 108  | RING, A/P SPRING         | H    |
|     |                              |              | 109  | HOSE                     | H    |
|     |                              |              | 110  | LEVER, STARTER CABLE     | T    |
|     |                              |              | 111  | SPRING, STARTER BRACKET  | T    |
|     |                              |              | 112  | BRACKET, STARTER CABLE   | T    |

PART NUMBER (000-000) - NO AVAILABLE STOCK

## BN WATERCRAFT CARBURETOR

### High Performance Super BN Series

Our Performance BN Carburetors were specially designed to meet the needs of high horsepower racing watercraft. We have achieved greater air flow and fuel flow through extensive testing to provide maximum output for racing engines. Special needle valves and springs give optimum "pop-off" with larger high and low speed jets for "first to the buoy" performance.

#### BN38-8075/8076

Performance dual 38 mm carbs with a shaft coupling included. Designed exclusively for dual 38 mm kits using most after market manifolds and flame arrestors.

- Features a 2.0 Viton needle valve, #65 pilot jet, #107.5 main jet, primer type cold starter fitting, angled fuel fitting and instruction manual.



#### BN38-34-8113

Performance single 38 mm carb to replace most standard BN or Super BN carb.

- Features a Viton 2.0 needle valve, extended throttle shaft for dual or triple applications, #65 pilot (slow) jet, #107.5 main (high) jet, no butterfly choke, primer fitting, and owners manual.

#### BN44-40-8067

Performance single 44 mm for most sit-down models requiring larger jets.

- Features a Viton 2.5 needle valve, extended throttle shaft for dual or triple applications, #120 pilot (slow) jet, #140 main (high) jet, no butterfly choke, primer fitting and owners manual.

#### BN44-750K

High performance 44 mm super BN carb kit with manifold, K & N flame arrestor, primer pump and installation hardware.

- For Kawasaki 750SS/SX.

#### BN46-750K

High performance 46mm super BN carb kit with manifold, K&N flame arrestor, primer pump and installation hardware.

- For Kawasaki 750SS/SX

### Pro racing super BN 46 series

The "Biggest" Super BN ever made. The Super BN46 features a large 48mm intake tapering to a 42mm Venturi and controlled by a 46mm butterfly valve. This carb comes ready to race

#### BN46-42-8002

High performance 46mm super BN carb with extended throttle shaft to make dual kits. Designed to give pro level performance. Features a 2.5 Viton needle vale, #120 pilot jet, #150 main jet, primer type cold starter fitting, angled fuel fittings and instruction manual.

*Note: Bolt pattern is the same as BN44, some manifold porting may be necessary to maximize air flow.*



## BN CARBURETOR PARTS



### Super BN 38 Needle Valve Kit BN38NV

- Replacement kit for Super BN38, contains a 2.0 needle valve, and 115 gram spring with approximately 32lbs pop off and and 80gram spring for 21 lbs pop off.

### Super BN 44 Needle Valve Kit BN44 NV1

- Replacement kit for Super BN44, contains a Viton 2.3 needle valve and 65 gram spring for 15 lbs pop off. Instructions included.

### Super BN44 Needle Valve Kit BN44 NV2

- Replacement kit for High Performance Super BN44 and 46, contains a 2.5 needle valve and 80 gram spring for 14lbs pop off. Instructions included.

### Round BN Needle Valve Kit BN38/44NV

- Replacement needle valve kit for standard BN carbs with round fuel pump.

### Rebuild kits for BN, SBN, BNI

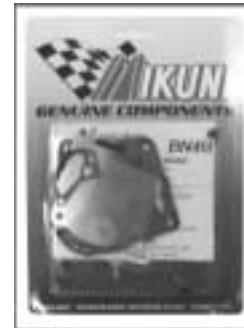
All the parts you need to rebuild your Mikuni BN Series carburetor. Does not include needle valve, see Needle Valve kits for this. See page 210 exploded view of carburetor for the parts included in this kits.

### BN Rebuild Kit BN38/44

- For 38/44mm early style round standard BN carbs.

### Super BN Carb Rebuild kit BN38/44SPR

- For 38/44mm rectangular Super BN carbs., and for 38/40mm "i" carbs.



### Throttle Shaft Rebuild Kits

Kit includes butterfly valve, shaft, seals, screws and instructions.

SBN 38mm BN/038TV

SBN 44mm BN/044TV

SBN 46mm BN/046TV

### Angled flange-nut wrench

Designed to make carb removal and installation a breeze.

BN/002 12mm wrench

BN/003 13mm wrench



### Super BN Owners Manual BN/004

This manual provides full details on tuning and service.



### Coupling Kit BN/001

Allows two carbs to be connected for dual carb setups



## BN WATERCRAFT CARBURETOR PARTS



### Super BN Tuning component

|   |                  |
|---|------------------|
| Pilot (Slow Speed) Jets                                 | N100.606-(size)  |
| • Sizes 50 through 150 in increments of 2.5             |                  |
| Main (High Speed) Jets                                  | N102/221-(size)  |
| • Sizes 50 through 200 in increments of 2.5.            |                  |
| Needle valve Assembly                                   | 786-35015-(size) |
| • Solid Needle, Viton Tipped, sizes 1.5, 2.0, 2.3, 2.5. |                  |
| Needle Valve Arm Springs 65g                            | 730-03030        |
| Needle Valve Arm Springs 115g                           | 730-03027        |
| Needle Valve Arm Springs 95g                            | 730-03027-T      |
| Needle Valve Arm Springs 80 grams(Black)                | 730-03033        |

### 30 lb Pop Off Pump

BN PMP

Gauge gives accurate pop off pressure readings. Our high pressure pump is very durable and easy to use. This pump is a must for tuning your carb.

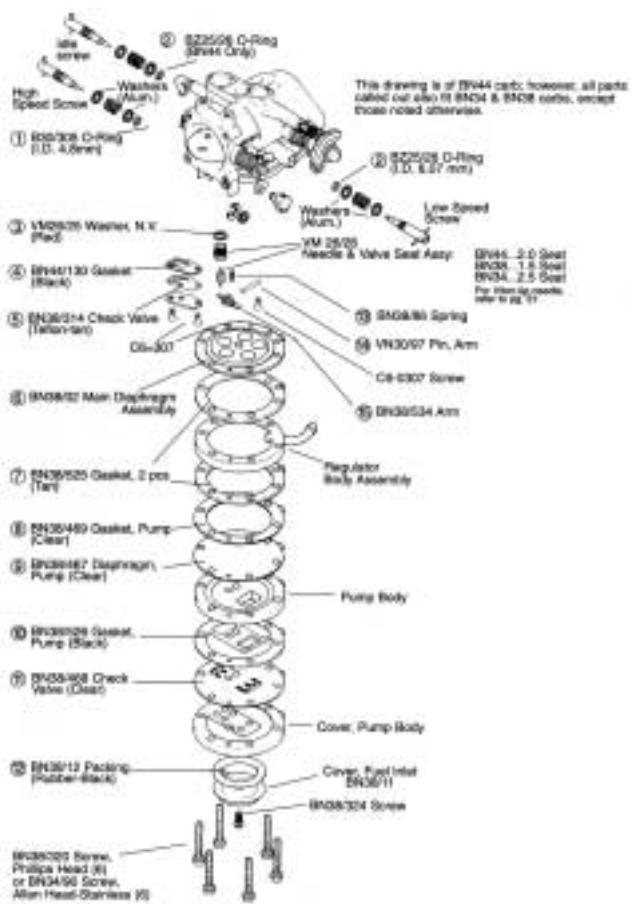


### 100lb Pop Off Pump

BN PMP100

Gauge & pump allow for readings on many stock carbs with small needle valves and strong springs.

## BN ROUND PUMP TYPE CARB



## SUPER BN WATERCRAFT CARBURETOR

## Rebuild Kit for Super BN38 &amp; BN44

Fits:

Mikuni Super BN38 &amp; BN44 (Square Pump)

Yamaha Water Vehicles with Super BN44

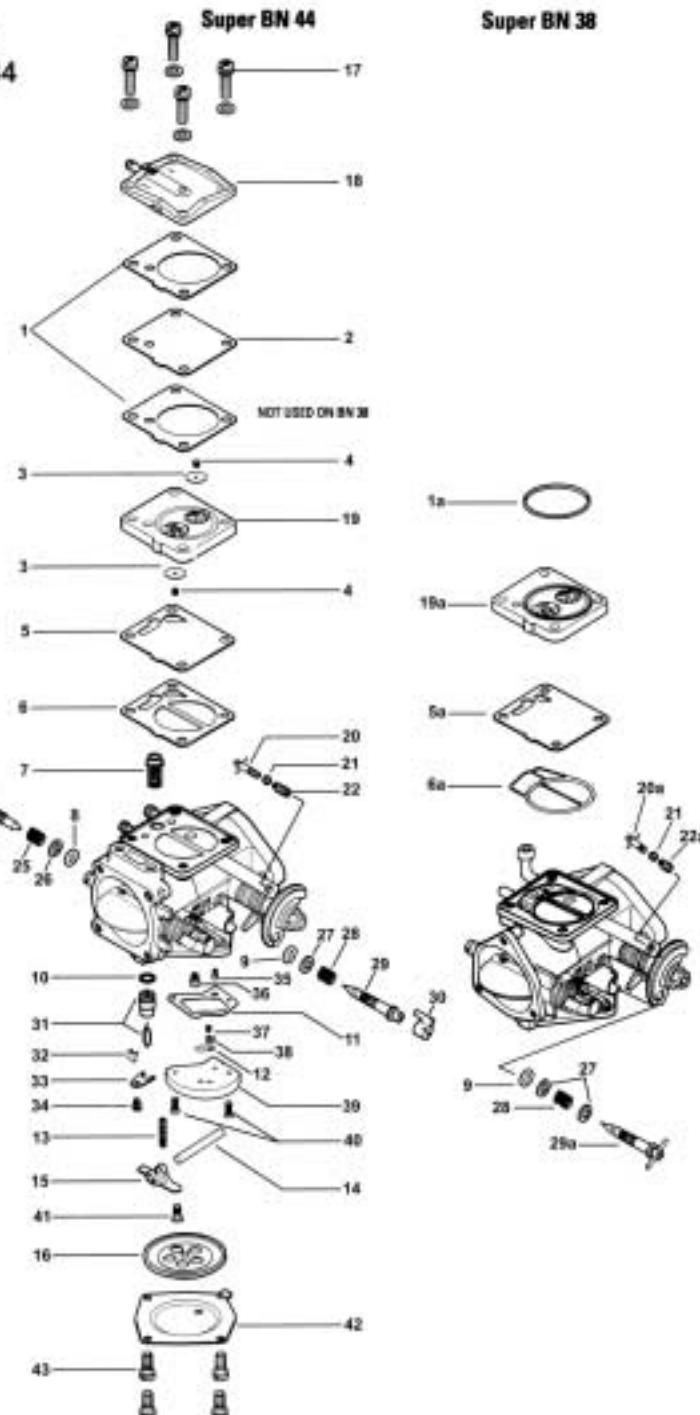
See-Doo with Super BN38

| No. | Part Number | Description                     |
|-----|-------------|---------------------------------|
| 1.  | BN38/547    | Gasket, Pump (2)                |
| 2.  | 616-72001*  | O-Ring                          |
| 3.  | BN34/97     | Diaphragm, Pump (Clear)         |
| 4.  | BN34/125    | Grommet, Check Valve (2, clear) |
| 5.  | BN34/100**  | Diaphragm, Damper               |
| 5.a | BN34/129*   | Diaphragm, Damper               |
| 6.  | BN34/101**  | Gasket, Damper                  |
| 7.  | BN44/145    | Filter                          |
| 8.  | B30/305     | O-Ring, Hi-Speed                |
| 9.  | MD12/15     | O-Ring, Low Speed               |
| 10. | KV/10       | O-Ring, Needle Valve            |
| 11. | BN34/123    | Gasket, Valve Body              |
| 12. | BN34/107    | Check Valve (Clear)             |
| 13. | 730-03027   | Spring, Arm (115 grams)         |
| 14. | VM30/97     | Pin, Arm                        |
| 15. | BN38/534    | Arm (Stainless)                 |
| 16. | BN44/145    | Diaphragm Assembly              |

Note: Kit contains parts 1 through 16

|      |                |                                  |
|------|----------------|----------------------------------|
| 17.  | BN34/120-30    | Screw w/ washers, (4, Stainless) |
| 18.  | BN34/95B       | Cover, Pump                      |
| 19.  | BN34/88**      | Body Assembly, Pump              |
| 19.a | BN34/128*      | Body Assembly, Pump              |
| 20.  | BN44/109**     | Stop Screw, Idle                 |
| 20.a | BN34/82*       | Stop Screw, Idle                 |
| 21.  | BN38/139       | Washer (Aluminum)                |
| 22.  | BN38/341**     | Spring, Idle                     |
| 22.a | BN38/344*      | Spring, Idle                     |
| 23.  | B26/03**       | Cap                              |
| 23.a | BN44/118*      | Cap w/ Tab                       |
| 24.  | 604-26017      | Adjuster, Hi Speed               |
| 25.  | BN38/344       | Spring, Hi Speed                 |
| 26.  | BN38/139       | Washer, Hi Speed (Aluminum)      |
| 27.  | BN38/172       | Washer, Low Speed (Aluminum)     |
| 28.  | BN38/343       | Spring, Low Speed                |
| 29.  | 604-26008**    | Adjuster, Low Speed              |
| 29.a | BN38/477*      | Adjuster, Low Speed w/ Cross Bar |
| 30.  | 930-804-036    | Cap                              |
| 31.  | 736-36015-size | Needle Valve Assembly (Viton)    |
| 32.  | VM15/285       | Spring Clip, Needle Valve        |
| 33.  | BN34/117-GG    | Plate, Needle Valve Retainer     |
| 34.  | CW2-0307-G     | Screw w/ Washer                  |
| 35.  | N103-606-size  | Jet, Low Speed                   |
| 36.  | N102-221-size  | Jet, Hi Speed                    |
| 37.  | BV15/121-05-GG | Screw                            |
| 38.  | BN34/108-GG    | Plate, Valve                     |
| 39.  | BN44/165       | Valve Body Assembly              |
| 40.  | C5-0414-G      | Screw (2 pcs)                    |
| 41.  | C5-0308-G      | Screw                            |
| 42.  | BN44/147       | Cover (Stainless)                |
| 43.  | MCWS-0512      | Screw w/ Washer (4, Stainless)   |

## NOTE:

Parts marked w/ single asterisk (\*) fit BN38 only.  
Parts marked w/ double Asterisk (\*\*) fit BN44 only.



## BN46I WATERCRAFT CARBURETOR

| No. | Part Number | Description               |
|-----|-------------|---------------------------|
| 1.  | BN46I/13    | Gasket, Pump              |
| 2.  | BN46I/14    | Diaphragm, Pump (Clear)   |
| 3.  | 616-73002   | O-Ring                    |
| 4.  | BN46I/11    | Check Valve (2)           |
| 5.  | BN34/125    | Grommet (2)               |
| 6.  | BN46I/34    | Diaphragm, Damper         |
| 7.  | BN46I/15    | Diaphragm, Damper (Clear) |
| 8.  | 616-73003   | O-Ring                    |
| 9.  | BN44/146    | Filter, Fuel              |
| 10. | B30/305     | O-Ring, Hi Speed (2)      |
| 11. | MD12/16     | O-Ring, Low Speed         |
| 12. | KV/10       | O-Ring, Needle Valve      |
| 13. | BN34/123    | Gasket, Valve Body        |
| 14. | BN34/107    | Check Valve (Clear)       |
| 15. | VM30/97     | Pin, Arm                  |
| 16. | 730-03034   | Spring, Arm 95 gram       |
| 17. | BN38/534    | Arm (Stainless)           |
| 18. | BN44/145    | Diaphragm assy., Main     |

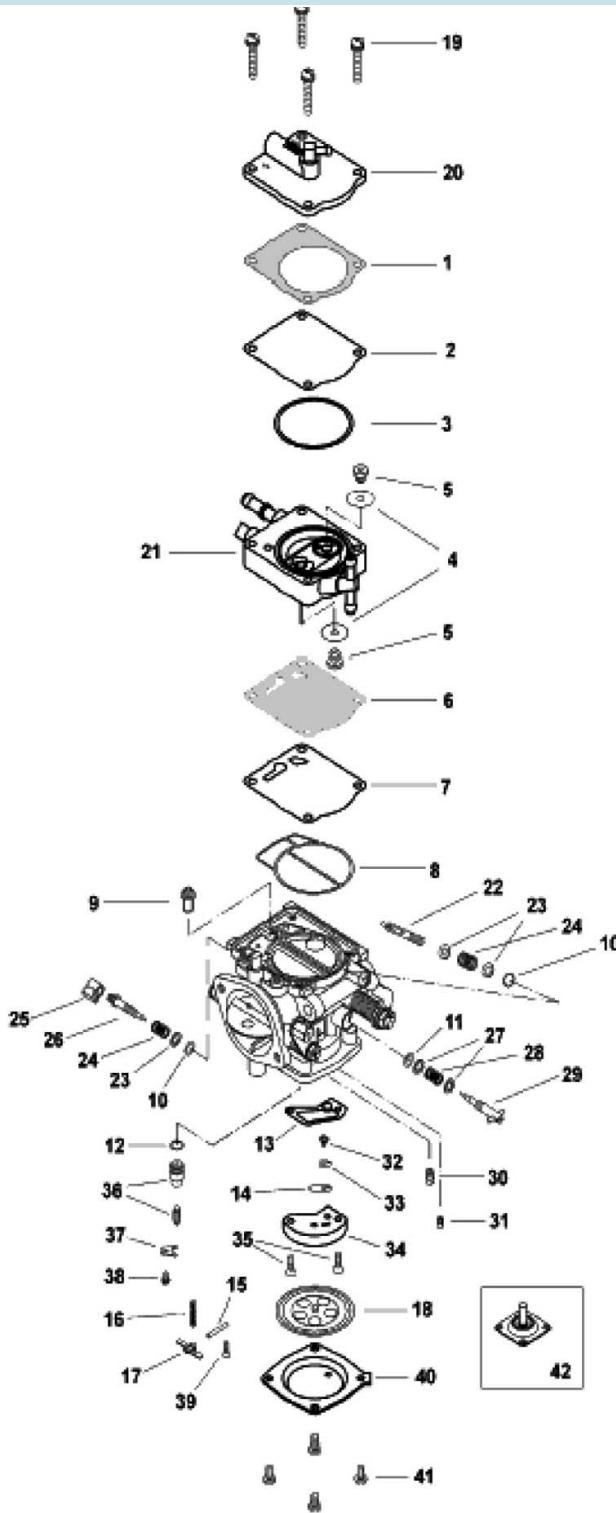
**NOTE:** Kit contains parts 1 through 18

|     |                |                          |
|-----|----------------|--------------------------|
| 19. | BN34/120-35    | Screw w/ washers (4)**   |
| 20. | BN46I/xx       | Cover, Pump              |
| 21. | BN46I/49       | Body Assy., Pump         |
| 22. | BN38I/40       | Stop Screw, Idle         |
| 23. | BN38/39        | Washer, Aluminum (3)     |
| 24. | BN38/344       | Spring (2)               |
| 25. | 999-904-006    | Cap, Hi Speed Adjuster   |
| 26. | 604-25017      | Adjuster, Hi Speed       |
| 27. | BN38/172       | Washer, Aluminum (2)     |
| 28. | BN38/343       | Spring, Low Speed        |
| 29. | BN38/477       | Adjuster, Low Speed      |
| 30. | N102.221-size  | Jet, Hi Speed            |
| 31. | N100.606-size  | Jet, Low Speed           |
| 32. | BV15/121-05-GG | Screw                    |
| 33. | BN34/108-GG    | Plate, Valve             |
| 34. | BN44/165       | Valve Body Assy.         |
| 35. | C5=0414-G      | Screw (2)                |
| 36. | 786-35018-size | Needle Valve Assy.       |
| 37. | BN34/117-GG    | Plate, Needle Valve rtrn |
| 38. | CW2=0307-G     | Screw w/ Washer          |
| 39. | C6=0308-G      | Screw                    |
| 40. | BN44/147       | Cover (Stainless)        |
| 41. | C2S=0514       | Screw (4)**              |
| 42. | BN40I/22       | Diaphragm, Acclr. Pump   |

\*\*Tightening Torque:

Part No. 19: 4.5 N/m (45 Kg/Cm)

Part No. 41: 3.5 N/m (35 Kg/Cm)



## VM SERIES CARBURETORS

*The most popular high performance single carburetors in the use of motorsports.*



### Round Slide Single Carburetors

- The performance standard for use in any application on both 2-stroke and 4-stroke engines.
- Designed to meet the unique demands of snowmobiles & motorcycles.
- Snow Carbs feature special throttle valve and needle valve designs which are better suited to colder, more dense air and constant throttle settings.
- Performance features include a large selection of bore sizes for increased fuel mixture flow to match engine modifications.
- Offers a wide range of tuning components to allow precise fuel mixture metering in any application, at any throttle setting, under any riding condition.



Round Slide Singles Mikuni Carburetor Standard Specifications

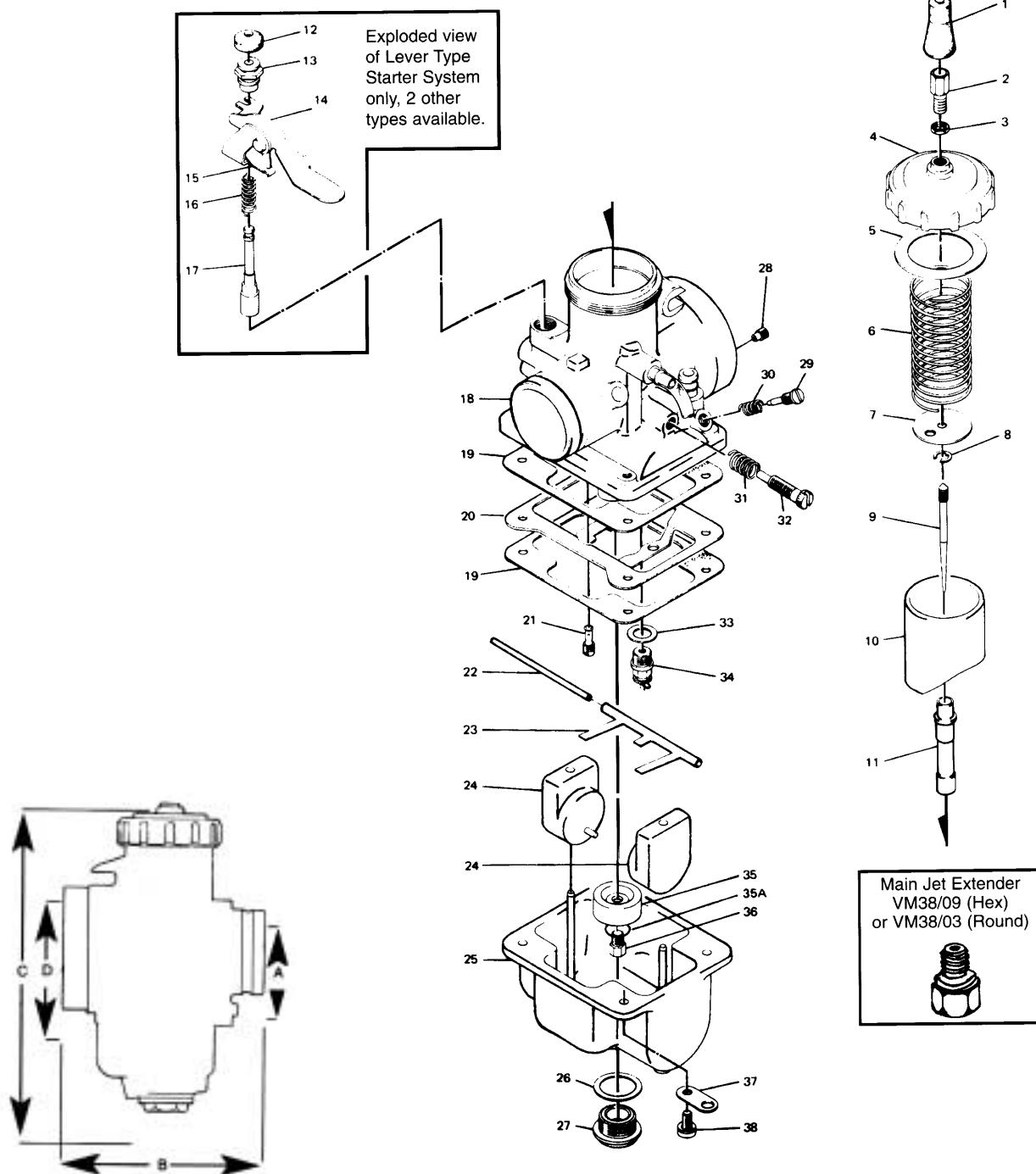
| Carb #     | Size (mm) | Main Jet (4/042) | Pilot Jet (VM22/210) | Needle Jet (Series #) | Jet Needle | Throttle Valve (Part #) | Main Air Jet (Part #) | Needle Valve (Part #) |
|------------|-----------|------------------|----------------------|-----------------------|------------|-------------------------|-----------------------|-----------------------|
| VM-16-519* | 16        | 70               | 25 (VM22/210)        | D-8 (VM16/67)         | 3DJ3       | (VM16/137) 2.5          | (BS30/97) 0.5         | (VM34/39) 3.3         |
| VM18-144*  | 18        | 80               | 30                   | O-0 (145)             | 4F18       | (VM18/158) 3.0          | 2.5                   | (VM15/172) 1.5        |
| VM20-273*  | 20        | 180              | 225 (M28/1001)       | O-6 (239)             | 4J13       | (VM20/491) 2.0          | (VM13/04) 0.5         | (VM15/172) 1.5        |
| VM22-133*  | 22        | 100              | 30                   | N-8(257)              | 4D20       | (VM26/21) 2.0           | 2.5                   | (VM26/26) 2.0         |
| VM24-512   | 24        | 210              | 40                   | N-8 (864)             | 5L14-4     | (VM26/21) 1.5           | (MD13/24) 0.8         | (VM26/26) 2.0         |
| VM26-8074  | 26        | 190              | 60                   | N-8 (182)             | 5F3        | (VM28/56) 2.0           | (BS30/97) 0.5         | (VM2626) 2.5          |
| VM30-83    | 30        | 250              | 40                   | P-5 (159)             | 6F5        | (VM34/110) 2.5          | (BS30/97) 2.0         | (VM34/39) 3.3         |
| VM30-164   | 30        | 270              | 35                   | Q-0 (159)             | 6DH        | 2.0                     | 2.5                   | 1.5                   |
| VM32-193*  | 32        | 200              | 35                   | Q-6 (159)             | 6DP17      | (VM32/65) 3.0           | (BS30/97) 2.0         | (VM34/39) 3.3         |
| VM32-33    | 32        | 200              | 35                   | Q-6 (159)             | 6DP17      | (VM34/110) 3.0          | (BS30/97) 2.0         | (VM34/39) 3.3         |
| VM32-282   | 32        | 280              | 35                   | Q-0 (159)             | 6DH4       | 2.5                     | 2.5                   | 1.5                   |
| VM34-168*  | 34        | 260              | 35                   | Q-2 (159)             | 6DH4       | (VM34/110) 2.5          | (BS30/97) 2.0         | (VM34/39) 3.3         |
| VM34-275*  | 34        | 260              | 35                   | Q2 (159)              | 6DH4       | (VM32/65) 2.5           | (BS30/97) 2.0         | (VM34/39) 3.3         |
| VM34-389   | 34        | 330              | 30                   | Q-0                   | 6DH3       | 2.5                     | 2.5                   | 1.5                   |
| VM36-4     | 36        | 310              | 35                   | Q-5 (159)             | 6FJ6       | (VM36/36) 2.5           | (BS30/97) 2.0         | (VM34/39) 3.3         |
| VM38-9     | 38        | 330              | 30                   | Q-2 (166)             | 6DP1       | (VM38/24) 2.5           | (BS30/97) 0.5         | (VM34/39) 3.3         |
| VM38-21    | 38        | 360              | 40                   | Q-0 (166)             | 6DH3       | (VM38/24) 2.5           | 2.5                   | (VM28/163) 1.5        |
| VM44-3     | 44        | 310              | 35                   | AA-5(224)             | 7F7        | (VM44/23) 2.5           | (BS30/97) 0.5         | (VM34/39) 3.3         |
| VM44-7     | 44        | 540              | 35                   | AA-4(224)             | 7DH2       | (VM40/02) 1.5           | (BS30/97) 0.7         | (VM28/163) 1.5        |

\*VM18-144: Special order, clamp on type; VM16-159: clamp on type \*VM20-273, YSR50 flange type; \*VM22-133: flange type; \*VM32-193, right side idle screw (match to VM32-33); \*VM34-168, 11.5mm bell, large fuel inlet; VM34-275, right side idle screw (match to VM34-168); all VM26 thru VM44mm, spigot type

See next page for carburetor sizes and measurement diagram

## VM SPIGOT MOUNT TYPE CARBURETORS

### VM Series Part List



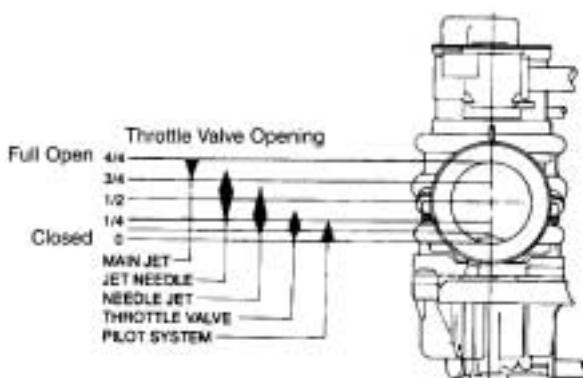
| MODEL       | VM18           | VM20                 | VM22               | VM26 | VM30 | VM32 | VM34 | VM36 | VM38 | VM44 |
|-------------|----------------|----------------------|--------------------|------|------|------|------|------|------|------|
| A           | CLAMP ON 22 ID | FLANGE 50.8 BOLT CTR | FLANGE 49 BOLT CTR | 35   |      | 40   |      | 43   |      | 52   |
| B           | 67             | 66                   | 85                 | 93   |      | 93   | 102  | 93   |      | 116  |
| C           | 108            | 115                  | 114                | 122  |      | 137  | 142  | 137  | 152  | 154  |
| D           | 32             | 43                   | 43                 | 44   |      | 58   |      | 62   |      | 70   |
| TOTAL WIDTH | 61             | 76.5                 | 82                 | 82   |      | 83   |      | 79   |      |      |



## VM Series - Part List

| ITEM # & DESCRIPTION             | VM26                                    | VM28     | VM30   | VM32     | VM34                | VM36               | VM38                      | VM40    | VM44 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------------|---|----------|--|----------|---------------------|--------------------|---------------------------|---------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 1. Rubber Cap, throttle cable    | Straight VM26/46 - 90° angle M22/18     |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Cable Adjuster                | Straight M18F/43 - 90° angle I-M22-10-3 |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Locknut, cable adjuster       | B30/247                                 |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Top, mixing chamber           | VM26/44<br>VM26/56                      |          | VM34/27  |          |                     | VM36/09            |                           | VM44/05 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Gasket, mixing chamber top    | VM26/57                                 |          | VM34/29  |          |                     | VM36/06            |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6. Spring, throttle valve        | VM24/195                                | VM28/58  | VM34/50<br>VM34/06                                     | VM34/55  |                     |                    |                           | VM44/13 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7. Plate, spring seat            | VM26/55                                 | VM28/132 | VM34/31  |          |                     | VM35/09            |                           | VM44/09 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8. Clip, needle positioning      | VM20/369                                |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9. Needle                        | J8-* (#5 Series) page 220               |          | J8-* (#6 Series) page 221                              |          |                     |                    | J8-* (#7 Series) page 222 |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10. Throttle Valve (Slide)       | VM28/56-*                               |          | VM34/110-*   |          | VM36/36*            | VM38/24*           | VM44/23-*                 |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11. Needle Jet                   | VM28/86*                                | VM30/38* | VM34/05-*  |          |                     | VM34/17*           | VM44/10-*                 |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12. Rubber Cap, starter plunger  | VM20/455                                |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13. Fitting, starter plunger     | VM26/116                                |          | VM20/456   |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 14. Lever, starter               | VM28-51A                                |          | VM32/53  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15. Spring Plate, starter level  | VM26/09C                                |          | VM32/17  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16. Spring, starter plunger      | VM14SC11/89<br>VM16/42                  |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17. Plunger, starter             | VM15/62                                 |          | VM18/144   |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 18. Body, mixing chamber         |   |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 19. Gasket, float bowl           | VM28/129                                |          | VM34/30 (w/o Baffle Plate)<br>VM34/71 (w/Baffle Plate) |          | VM36/20             |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20. Baffle Plate, float bowl     |   |          | VM34/72  |          |                     | VM36/16<br>VM36/40 | VM44/12                   |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21. Pilot Jet                    | VM22/210* 216                           |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22. Pin, float arm hinge         | BV26/22                                 |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 23. Arm, float                   | VM28/166                                |          | VM34/73  |          |                     | VM36/15            |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24. Float, independent           | CM24/236 (Flange Carb)                  |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                  | VM28/164 (Spigot)                       |          | VM34/61(w/Baffle Plate)<br>VM34/36 (w/o Baffle Plate)  |          |                     | VM24/236           |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24. Float, connected twin brass  | VM24/171                                |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25. Bowl, float                  |   |          | VM34/68  |          |                     | VM36/07            |                           | VM44/04 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26. Washer, main jet plug        | VM28/134                                |          | 4/053  |          |                     | VM28/134           |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 27. Plug, main jet               | VM28/133                                |          | VM34/42  |          | VM36/14<br>VM28/253 | VM38/08            | VM28/133                  |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 28. Air Jet                      | BS30/97-* page 216                      |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 29. Air Adjusting Screw          | VM20/214                                |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30. Spring, air adjusting screw  | M12F/46A                                |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 31. Spring, idle adjusting screw | M20/11                                  |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 32. Idle Adjusting Screw         | VM24/224                                | VM28/142 | VM24/224   | VM22/171 |                     |                    | VM24/224                  |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 33. Washer, needle valve         | VM26/25                                 | B34/52   |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 34. Needle Valve & Seat Assy.    | VM26/26                                 | See Page |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 35. Ring, main jet               | VM28/228                                | VM36/17  |  |          | VM28/228            |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 35A. Main Jet Washer             | VM20/169                                |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 36. Main Jet                     | 4/042-* see page 215                    |          |  |          |                     |                    |                           |         |      |  |  |  |  |  |  |  |  |  |  |  |  |  |

## TUNING COMPONENTS



### Functional Range Effectiveness of Tuning Parts - In Relation to the Throttle Valve Opening

- Approximate Values
- Pilot System - pilot air jet, pilot fuel jet, pilot fuel screw

*Note: Optional Power Jet will affect other tuning components.*

## MAIN JETS

- The main jet meters the amount of fuel entering the needle jet.
- Main jets control the fuel flow at the full throttle opening.
- Order by part # and size (ie. 4/042-150).
- Jets are listed by size, from leaner to richer.

### Large Hex

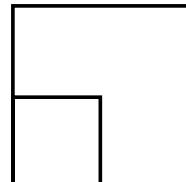
TCI PART# 4/042 - Jet Size

Jets are pre-packaged in bags of 4 but price is based on single jet.  
Please order Large Hex Main Jets in multiples of 4.

- 6mm hex width, 5mm thread diameter

Jet Size: (Increments)

50 thru 245 (5)  
250 thru 500 (10)  
520, 540, 560, 580, 600, 620, 640,  
650, 660, 680, 700, 710, 720



### Mikuni Parts Stamping

This is your quality assurance guarantee. Do not accept anything less than the best.

### Small Round

TCI PART#N102/221 - Jet Size

- Length 9mm, 6mm OD
- Jet Size: (Increments)  
30 thru 250 (2.5)



### Press In

TCI PART#N208.099 - Jet Size

- Length 9mm, 6mm OD
- Jet Size: (Increments)  
115 thru 150 (5)



### Large Thread

TCI PART#VM11.22 - Jet Size

- Special order part
- Length 8mm, 10.5mm OD
- Jet Size: (Increments)  
50 thru 180 (5)

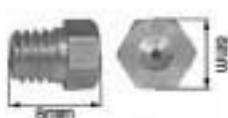


### Small Hex

TCI PART#M10/14 - Jet Size

- Length 8mm, 6mm OD

Jet Size: (Increments)  
40 thru 200 (5)

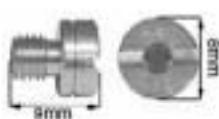


### Large Round

TCI PART#N100/604 - Jet Size

- Length 9mm, 8mm OD

Jet Size: (Increments)  
50 thru 200 (2.5)



## PILOT JETS

- Controls starting, idling and low speed operation until approximately 1/4 throttle.

### Fits all VM, TM, TMX Carburetors

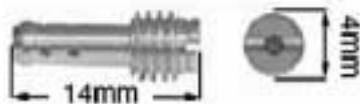
TCI PART# VM22/210 - Jet Size

\$3.49-J

- Length 14mm, Outer Diameter 4mm

Jet Size: (Increments)

10 thru 40 (2.5)  
40 thru 110 (5.0)



### Fits all RS & HSR Carburetors and late model Suzuki RM 125/250

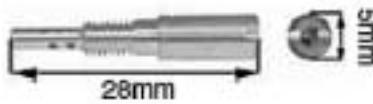
TCI PART# VM28/486 - Jet Size

- Length 28mm, Outer Diameter 5mm, Inner Diameter 2mm

- Thread 4mm x 0.70mm

Jet Size: (Increments)

10 thru 70(2.5)



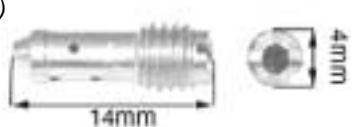
### Bleed Type

TCI PART# BS 30/96 - Jet Size

- Length 14mm, Outer Diameter 4mm

Jet Size: (Increments)

30 thru 60 (2.5)



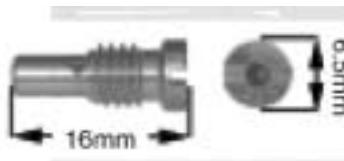
### Pilot Jet for B-Type Butterfly Carburetors

TCI PART#N101.043 - Jet Size

- Length 16mm, Outer Diameter 6.5mm

Jet Size: (Increments)

30 thru 110 (2.5)



### Low Speed Tuning for Super BN

TCI PART#N100.606 - Jet Size

- Length 6.5mm, Outer Diameter 4mm
- 4mm thread

Jet Size: (Increments)

50 thru 150 (2.5)



### Non-Bleed Type

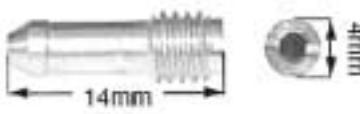
Used in many original equipment carburetors OEM for new Triumph

TCI PART#N151.067 - Jet Size

- Length 14mm, Outer Diameter 4mm

Jet Size: (Increments)

30 thru 60 (2.5)



### OEM for TMX CR,RM, YZ, KX

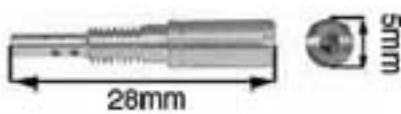
TCI PART#N224.103 - Jet Size

- Length 28mm, Outer Diameter 5mm, Inner Diameter 2.5mm
- Has groove above thread area

Jet Size: (Increments)

10 thru 17.5

10 thru 70 (2.5)



### OEM Carbs, Banshee

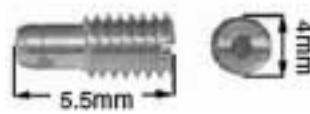
Banshee OEM , OEM applications

TCI PART#M28/1001 - Jet Size

- Length 5.5mm, Outer Diameter 4mm

Jet Size: (Increments)

15 thru 70 (2.5)



## AIR JETS / STARTER JETS

### AIR JET

TCI PART# BS 30/97 - Jet Size

- Length 7.5mm
- Thread 4mm x 0.70mm
- A fine tuning component in regulating air-fuel mixture
- Meters air flow to the needle jet
- For most Mikunis

Jet Size: (Increments)  
.5 thru 2.0 (.1)



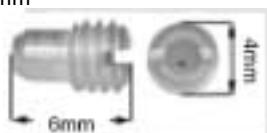
### STARTER JET (special order)

TCI PART#VM17/1002- Jet Size

- Controls enricher on TM carburetors
- Length 6mm, Outer Diameter 4mm

Jet Size: (Increments)

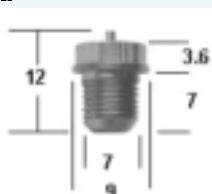
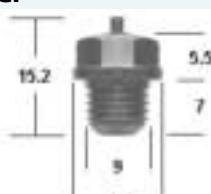
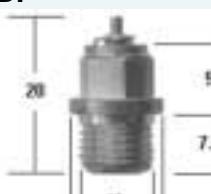
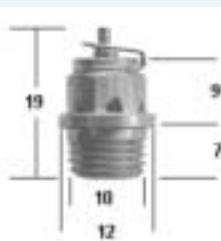
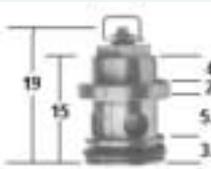
15 thru 120 (1.0, 1.5, 2.0)



## NEEDLES & SEAT ASSEMBLIES (AKA NEEDLE VALVE)

- termines and regulates the rate of flow of fuel from the gas tank to the float bowl assembly.

| Pic | Application                                 |            | Standard Needle & Size |                              | Viton Tip Needle & Size |                         |
|-----|---|------------|------------------------|------------------------------|-------------------------|-------------------------|
|     |   |            | TCI #                  | Available Size               | TCI #                   | Available Size          |
| A   | VM18, VM20                                  | Threaded   | VM15/172               | 1.2, 1.8                     |                         |                         |
| B   | VM28 Flat Slide                             | Push-in    | VM24/557               | 1.5, 2.0, 2.5                |                         |                         |
| C   | VM26,28 Round Slide BN34, 38, 44 Watercraft | Threaded   | VM26/26                | 1.5,2.0,2.5,2.8              | VM26/185                | 1..2, 1.5               |
| D   | VM30 thru 44                                | Threaded   | VM28/163               | 1.2, 1.5, 1.8, 2.0, 2.5, 3.0 | VM28/511                | 1.5, 1.8, 2.0           |
| E   | VM30 thru 44                                | Threaded   | VM34/39                | 2.5, 3.5                     |                         |                         |
| F   | VM30 thru 44                                | Threaded   | VM38/11                | 3.5 (six holes)              |                         |                         |
|     | VM29,33Smoothbore                           | Threaded   | N122/032               | 2.5, 2.8                     |                         |                         |
| G   | HS40 Harley-Davidson                        | Push-in    |                        |                              | 786-36007               | 3.8                     |
| H   | HSR42,45                                    | Push-in    |                        |                              | 786-27001               | 2.3, 3.5, 4.2(std)      |
| J   | TM32, 34, 36, 38 Flat Side                  | Push-in    |                        |                              | 786-46001               | 1.2, 1.5, 1.8, 3.3, 3.5 |
| K   | RS38, 36, 38, 40                            | Push-in    | N149.040               | 2.0, 2.5, 2.8                |                         |                         |
| L   | TMX35, 38                                   |            | 786-36004              | 3.5                          |                         |                         |
| L   | TMX35, 38                                   |            | 786-36004 A            | 1.8                          |                         |                         |
| M   | BN34, 38, 44 Watercraft Carb                | Threaded   |                        |                              | 786-15005               | 1.5, 2.0, 2.5           |
| N   | Super BN38, 44 Watercraft                   | Push-in    |                        |                              | 786-35015               | 1.5, 2.0, 2.3, 2.5      |
| O   | Super BN38,44                               | Solid-type | 786-15008              | 1.5,2.0,2.3,2.5              |                         |                         |
| P   | TM33 - OE                                   |            | N133/200               | 1.2,1.5,1.8,2.0,2.3          |                         |                         |

**A.****B.****C.****D.****E.****F.****G.****H.****J.****K.****L.****M.****N.**

The larger the size the greater the flow; 1.5 is the suggested size for fuel pumps.

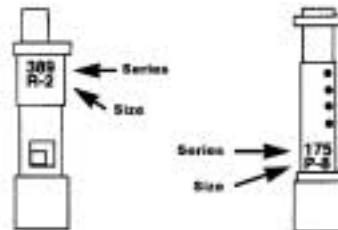
O. and P. pictures not available



## NEEDLE JETS

### Needle Jets (a.k.a. Nozzles, Emulsion Tubes)

- Main fuel passage together with the needle controlling 1/4 to 3/4 throttle range.



### Example on How to Order

#### TCI Part# VM34/05 P-2

- Series #159 (VM34/05) is outside characteristics
- 'P' is inside diameter size in increments of .050 mm
- '2' is inside diameter size in increments of .005mm

| Carb App. | VM26 Round                          | VM29 ↓ VM33 Smoothbore                                  | New TMX Dirtbikes               |
|-----------|-------------------------------------|---|---------------------------------|
| Part #:   | VM28/86                             | VM28/16   | 784-13005                       |
| Leanest ↑ | O-0<br>O-2*<br>O-3*<br>O-4*<br>Q-2* | O-0<br>O-2*<br>O-4<br>6<br>8<br>P-0<br>2<br>4<br>6<br>8 | S-4<br>S-7<br>S-8<br>S-9<br>T-0 |
| Type      | Primary                             | Bleed   |                                 |
| Series #  | 182                                 | 261   | 633                             |

| Carb App. | VM30 ↓ VM36 Round Slide  |         | VM38 Round Slide  | VM28 ↓ VM30 Small Body   | VM28 Round TM28 Flat  | VM30 ↓ VM36 Round Slide   | VM40 ↓ VM44 Round   | YAM OEM   | TM32 ↓ TM38 Flat Slide   | TM33 Flat Slide            | RS34 ↓ RS40, HS40 | HSR 42/45 |
|-----------|--|---------|---|--|---|---|---|---|--|----------------------------|-------------------|-----------|
| Part#:    | VM34/05  | VM26/17 | VM34/17   | VM30/38  | VM30/46   | VM32/19   | VM44/10   | VM38/41   | 785-2400 1   | 784-24005                  | 784-13002         | 784-43000 |
| Leanest ↑ | N-4*<br>6*<br>8*<br>O-0<br>2<br>4<br>5<br>6<br>8<br>P-0<br>2<br>4<br>5<br>6<br>8<br>8<br>Q-0<br>2<br>4<br>5<br>6<br>6<br>8<br>R-0<br>2<br>4<br>5<br>5*<br>6*<br>8* | Q-2     | N-6*<br>8*<br>O-0*<br>2*<br>O-0*<br>2*<br>4*<br>6*<br>8*<br>P-0<br>2<br>4<br>5<br>6<br>8*<br>P-0<br>2<br>4<br>5<br>6<br>8*<br>Q-0*<br>2<br>4<br>5<br>6<br>6<br>8*<br>Q-0<br>2<br>4<br>5<br>6<br>8<br>R-0<br>2<br>4<br>5<br>6<br>8 | O-0*<br>4<br>6*<br>8*<br>8*<br>4*<br>2*<br>O-0*<br>4*<br>2*<br>6<br>8*<br>P-0<br>2<br>4<br>5<br>6<br>8*<br>BB-0<br>-5<br>CC-0<br>-5<br>R-0<br>2*<br>4*<br>6*<br>8* | Q-5<br>Z-0<br>P-4*<br>8*<br>8*<br>4*<br>2*<br>O-0*<br>2*<br>6<br>8*<br>P-0<br>2<br>4<br>5<br>6<br>8*<br>BB-0<br>-5<br>CC-0<br>-5<br>R-0<br>2*<br>4*<br>6*<br>8* | N-6*<br>8*<br>2*<br>4<br>6<br>8*<br>P-0<br>4<br>6<br>8*<br>BB-0<br>4<br>R-0<br>5<br>2<br>4<br>6<br>8<br>R-0<br>2*<br>4*<br>6*<br>8* | O-0*<br>2*<br>4<br>6<br>4*<br>P-8*<br>Q-0*<br>2*<br>P-0<br>2<br>8<br>Y-0*<br>2*<br>4<br>6<br>8<br>Z-0*<br>2*<br>4*<br>6*<br>AA-0*<br>BB-0 | P-8*<br>Q-0*<br>2*<br>P-0<br>2<br>8<br>Y-0*<br>2*<br>4<br>6<br>8<br>Z-0*<br>2*<br>4*<br>6*<br>AA-0*<br>BB-0 | O-6*<br>8*<br>4<br>P-0<br>2<br>8<br>Y-0*<br>2*<br>4<br>6<br>8<br>Z-0*<br>2*<br>4*<br>6*<br>AA-0*<br>BB-0 | Y-2<br>4<br>6<br>8<br>2-0* |                   |           |
| Richest ↓ |  |         |   |  |   |   |   |   |  |                            |                   |           |
| Type      | Primary  | Primary | Primary   | Primary  | Bleed   | Bleed   | Primary   | Primary   | Primary  | Primary                    | Non-Bleed         | Non-Bleed |
| Series #  | 159  | 164     | 166/480   | 169  | 175   | 176   | 224   | 247   | 389  | 499                        | 568               | 723       |

\* Special Order (not a stocking item)



## THROTTLE VALVES

### Throttle Valve (a.k.a. Cutaway or Slide)

- Affects the air-fuel mixture from 1/8 to 1/2.
- The larger the cutaway (size), the more air flows, which causes a leaner condition.

*Note: Brass slides are chrome plated; aluminum slides are anodized, xylan or nickel-plated.*



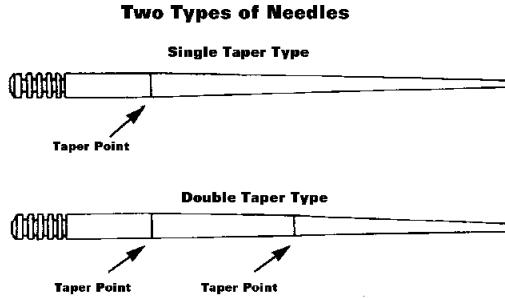
| Carb Application               | Part Number   | Cut-A-Way Sizes Available | Slide Material | Idle Screw Location | Guide Pin Groove Width (mm) |
|--------------------------------|---------------|---------------------------|----------------|---------------------|-----------------------------|
| VM26-28                        | VM28/56 -     | 1.5, 2.0                  | Brass          | Left                | 2.05                        |
| VM30 Small Body                | VM30/176 -    | 1.0, 1.5, 2.0, etc.       | Brass          | Left                | 2.05                        |
| VM30, 32, 34                   | VM32/65 -     | 1.5 thru 3.5              | Brass          | Right               | 2.60                        |
| VM30, 32, 34                   | VM34/110 -    | 1.0 thru 3.5              | Brass          | Left                | 2.60                        |
| VM32, 34<br>Flange Style Carbs | VM28/156-     | 1.5, 2.0, 2.5             | Brass          | Left                | 2.05                        |
| VM36                           | VM36/36 -     | 1.5 thru 3.5              | Brass          | Left                | 3.05                        |
| VM36                           | VM36/39 -     | 3.0, 3.5                  | Brass          | Right               | 3.05                        |
| VM38                           | VM38/24 -     | 1.0 thru 3.5              | Brass          | Right               | 3.05                        |
| VM38                           | VM38/52 -     | 1.5 thru 3.0              | Brass          | Left                | 3.05                        |
| VM40, 44                       | VM40/02 -     | 0.5 thru 4.0              | Alum.          | Left                | 3.05                        |
| VM40, 44                       | VM44/23 -     | 1.5 thru 4.0              | Brass          | Left                | 3.05                        |
| TM32.34                        | 832-39012 -   | 4.0                       | Alum.          | Left                |                             |
| TM36, 38-1,3                   | 832-43002 -   | 1.5 thru 5.0              | Alum.          | Left                |                             |
| TM38-85, 86                    | 832-43011 -   | 2.5 thru 4.5              | Alum.          | Left                |                             |
| TMX35, 38                      | 832-014 -     | 2.5 thru 6.0              | Alum.          | Left                |                             |
| TMS38, 250                     | 832-017-250 - | N/A                       | Alum.          | Left                |                             |
| TMS38, 125                     | 832-017-125 - | N/A                       | Alum.          | Left                |                             |

*For prices see page 194*

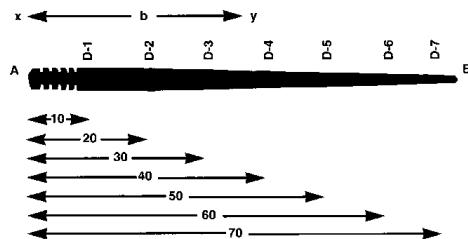
## NEEDLES

### Needles (a.k.a. Jet Needle)

- Controls fuel amount in the / to / throttle operation.
- A thinner taper needle will be richer and a thicker needle will be leaner.



|   | A    | B    | D-1   | D-2   | D-2   | D-4   | D-5   |
|---|------|------|-------|-------|-------|-------|-------|
| D-1 thru D-5 indicates diameter (mm) at each point. |      |      |       |       |       |       |       |
| J8-4E1  | 50.3 | 28.0 | 2.515 | 2.515 | 2.345 | 2.127 | 1.924 |
| J8-4DG6   | 50.3 | 24.0 | 2.518 | 2.518 | 2.405 | 2.119 | 1.850 |
| J8-4J13   | 50.2 | 24.0 | 2.513 | 2.513 | 2.230 | 1.800 | 1.400 |
| J8-4L6  | 50.3 | 24.5 | 2.515 | 2.515 | 2.178 | 1.660 | 1.190 |
| J8-4F10   | 50.2 | 24.5 | 2.513 | 2.513 | 2.385 | 2.135 | 1.877 |
| J8-4J11   | 41.5 | 21.3 | 2.512 | 2.506 | 2.188 | 1.776 |       |
| J8-4J6  |      |      |       |       |       |       |       |
| J8-4D2  |      |      |       |       |       |       |       |



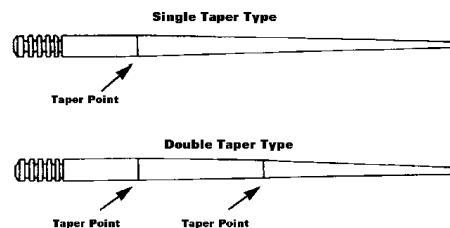
|   | A    | B    | C     | D-1   | D-2   | D-3   | D-4   | D-5   |
|---|------|------|-------|-------|-------|-------|-------|-------|
| D-1 thru D-6 indicates diameter (mm) at each point. |      |      |       |       |       |       |       |       |
| J8-5FJ9   | 59.2 | 35.0 | 2.517 | 2.517 | 2.517 | 2.364 | 2.021 |       |
| J8-5DI20  | 59.1 | 28.2 | 2.520 | 2.520 | 2.479 | 2.311 | 1.980 |       |
| J8-5F3  | 58.0 | 27.4 | 2.519 | 2.519 | 2.419 | 2.135 | 1.863 |       |
| J8-5EJ11  | 60.3 | 28.5 | 2.515 | 2.515 | 2.515 | 2.241 | 1.839 | 1.420 |
| J8-5FL11  | 60.3 | 28.2 | 2.518 | 2.518 | 2.438 | 2.175 | 1.740 | 1.256 |
| J8-5FL14  | 58.0 | 28.0 | 2.520 | 1.520 | 2.440 | 2.170 | 1.735 |       |
| J8-5FL7   | 58.0 | 28.0 | 2.518 | 2.518 | 2.440 | 2.170 | 1.735 |       |
| J8-5DP7   | 57.6 | 26.4 | 2.512 | 2.512 | 2.440 | 2.259 | 1.580 |       |
| J8-5J6  | 58.0 | 27.5 | 2.518 | 2.518 | 2.340 | 1.890 | 1.450 |       |
| J8-5L1  | 58.0 | 27.0 | 2.518 | 2.518 | 2.330 | 1.811 | 1.297 |       |
| J8-5J9  | 58.0 | 27.0 | 2.522 | 2.520 | 1.432 | 1.996 | 1.505 |       |
| J8-5D1  | 53.5 | 27.6 | 2.510 | 2.510 | 2.496 | 2.338 | 2.169 |       |
| J8-5DP2   | 60.3 | 32.4 | 2.515 | 2.514 | 2.513 | 2.418 | 2.067 | 1.418 |
| J8-5D5  | 57.6 | 30.0 | 2.513 | 2.513 | 2.510 | 2.366 | 2.205 |       |
| J8-5DH21  | 52.3 | 16.5 | 2.515 | 2.470 | 2.465 | 2.328 | 2.024 |       |
| J8-5J11   |      |      |       |       |       |       |       |       |
| J8-5FL17  |      |      |       |       |       |       |       |       |



## NEEDLES (A.K.A. JET NEEDLE) CON'T.

|   | A    | B    | D-1   | D-2   | D-3   | D-4   | D-5   | D-6   |
|---|------|------|-------|-------|-------|-------|-------|-------|
| D-1 thru D-6 indicates diameter (mm) at each point. |      |      |       |       |       |       |       |       |
| J8-6DH2   | 62.3 | 28.0 | 2.511 | 2.511 | 2.466 | 2.295 | 2.000 | 1.660 |
| J8-6F9  | 62.3 | 28.9 | 2.516 | 2.516 | 2.475 | 2.210 | 1.949 | 1.678 |
| J8-6CF1   | 61.5 | 29.5 | 2.512 | 2.512 | 2.429 | 2.240 | 1.974 | 1.710 |
| J8-6FJ6   | 62.3 | 35.2 | 2.505 | 2.505 | 2.505 | 2.376 | 2.040 | 1.606 |
| J8-6DH3   | 62.3 | 22.0 | 2.512 | 2.512 | 2.458 | 2.286 | 1.948 | 1.607 |
| J8-6J3  |      |      |       |       |       |       |       |       |
| J8-6L1  | 62.3 | 37.0 | 2.512 | 2.512 | 2.512 | 2.335 | 1.826 | 1.313 |
| J8-6DP17  | 62.3 | 32.1 | 2.518 | 2.518 | 2.518 | 2.372 | 1.834 | 1.141 |
| J8-6N1  | 62.3 | 37.0 | 2.514 | 2.514 | 2.514 | 2.278 | 1.672 | 1.058 |
| J8-6DP1   | 62.3 | 28.9 | 2.511 | 2.511 | 2.476 | 2.312 | 1.748 | 1.075 |
| J8-6F3  | 60.5 | 34.2 | 2.512 | 2.512 | 2.512 | 2.313 | 2.050 |       |
| J8-6DH4   | 62.3 | 25.5 | 2.520 | 2.520 | 2.440 | 2.258 | 1.915 | 1.575 |
| J8-6J1  | 64.0 | 36.2 | 2.517 | 2.517 | 2.517 | 2.339 | 1.919 | 1.495 |
| J8-6DH7   | 62.2 | 28.5 | 2.516 | 2.516 | 2.505 | 2.316 | 2.009 | 1.688 |
| J8-6DH8   | 62.2 | 20.3 | 2.538 | 2.538 | 2.436 | 2.208 | 1.827 | 1.497 |
| J8-6FL14  | 62.1 | 26.7 | 2.538 | 2.538 | 2.538 | 2.233 | 1.649 | 1.218 |
| J8-6F15   | 62.2 | 19.8 | 2.535 | 2.538 | 2.461 | 2.208 | 1.979 | 1.649 |
| J8-6DP10  | 62.4 | 26.5 | 2.51  | 2.51  | 2.44  | 2.26  | 1.56  | .89   |
| J8-6F13   | 64.2 | 32.8 | 2.50  | 2.46  | 2.46  | 2.24  | 1.97  | 1.70  |
| J8-6DJ30  | 64.7 | 26.3 | 2.51  | 2.51  | 2.45  | 2.09  | 1.66  | 1.24  |
| J8-6F5  | 62.3 | 19.0 | 2.515 | 2.456 | 2.454 | 2.364 | 2.098 | 1.840 |
| J8-6F4  | 62.3 | 19.4 | 2.515 | 2.442 | 2.436 | 2.206 | 1.939 | 1.678 |
| J8-6F8  | 62.3 | 21.5 | 2.512 | 2.512 | 2.386 | 2.214 | 1.945 | 1.688 |
| J8-6F16   | 64.6 | 18.4 | 2.520 | 2.404 | 2.400 | 2.201 | 1.941 | 1.679 |
| J8-6FJ4   |      |      |       |       |       |       |       |       |
| J8-6FJ11  |      |      |       |       |       |       |       |       |
| J8-6FJ40  |      |      |       |       |       |       |       |       |
| J8-6FJ41  |      |      |       |       |       |       |       |       |
| J8-6FJ43  |      |      |       |       |       |       |       |       |
| J8-6DH10  |      |      |       |       |       |       |       |       |
| J8-6DP4   |      |      |       |       |       |       |       |       |
| J8-6FI6   |      |      |       |       |       |       |       |       |

### Two Types of Needles



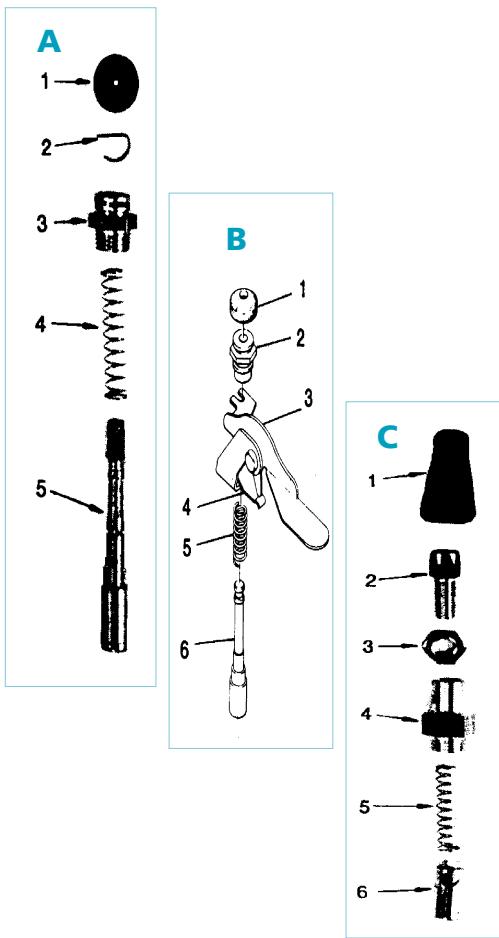


## NEEDLES (A.K.A. JET NEEDLE) CON'T.

|   | A    | B    | D-1  | D-2  | D-3  | D-4  | D-5  | D-6  | D-7  |
|---|------|------|------|------|------|------|------|------|------|
| D-1 thru D-7 indicates diameter (mm) at each point. |      |      |      |      |      |      |      |      |      |
| 7DH5  | 72.2 | 27.4 | 2.98 | 2.98 | 2.94 | 2.78 | 2.44 | 2.08 | 1.72 |
| 7F7   | 72.3 | 33.1 | 2.99 | 2.99 | 2.99 | 2.80 | 2.54 | 2.28 | 2.02 |
| 7F6   | 72.3 | 29.0 | 3.00 | 3.00 | 2.95 | 2.68 | 2.41 | 2.14 | 1.87 |
| 7DH3  | 72.5 | 28.1 | 2.98 | 2.98 | 2.96 | 2.80 | 2.47 | 2.11 | 1.76 |
| 7DH2  | 75.3 | 31.6 | 2.99 | 2.99 | 2.99 | 2.84 | 2.66 | 2.27 | 1.92 |

| Jet Needle Number         | Applications    | Needle Diameter Before Taper (mm) | Air Fuel Ratio |
|---------------------------|-----------------|-----------------------------------|----------------|
| J8-6FJ41                  | TM38 Flatslide  | 2.522                             | Leanest        |
| J8-6FM46                  |                 | 2.522                             | ↔              |
| J8-6FJ40                  |                 | 2.522                             | Richest        |
| J8-6DP04                  |                 | 2.515                             |                |
| J8-6EJ12-60               | TMX38 Flatslide | 2.60                              | Leanest        |
| 59                        |                 | 2.59                              | ↑              |
| 58                        |                 | 2.58                              |                |
| 57                        |                 | 2.57                              | ↓              |
| 56                        |                 | 2.56                              |                |
| 55                        |                 | 2.55                              |                |
| 54                        |                 | 2.54                              |                |
| 53                        |                 | 2.53                              | Richest        |
| J8-6EN11-58               | TMX35 Flatslide | 2.58                              | Leanest        |
| 57                        |                 | 2.57                              | ↑              |
| 56                        |                 | 2.56                              |                |
| 55                        |                 | 2.55                              | ↓              |
| 54                        |                 | 2.54                              |                |
| 53                        |                 | 2.53                              |                |
| 52                        |                 | 2.52                              |                |
| 51                        |                 | 2.51                              | Richest        |
| J8-6CEM01, 02, 03, 04, 05 |                 |                                   | Leanest        |
| 59                        |                 |                                   | ↑              |
| 58                        |                 |                                   |                |
| 57                        |                 |                                   | ↓              |

## CHOKE SYSTEMS



### A. Pull-Up Type

|                    |             |                |
|--------------------|-------------|----------------|
| 1. Rubber Cap      | VM20/455    | 36 - 44 Spigot |
| 2. Clip            | VM14SC11/99 | 36 - 44 Spigot |
| 3. Fitting         | VM20/300    | 36 - 44 Spigot |
| 4. Spring          | VM14SC11/89 | 36 - 44 Spigot |
| 5. Starter Plunger | VM38/06     | 36 - 44 Spigot |

### B. Lever Type

|                    |             |                |
|--------------------|-------------|----------------|
| 1. Rubber Cap      | VM20/455    | All            |
| 2. Fitting         | VM20/456    | All            |
| 3. Lever           | VM28/51A    | 28 Spigot      |
|                    | VM32/53     | 30 thru 44     |
| 4. Spring Plate    | VM26/09C    | 26 & 28 Spigot |
|                    | VM32/17     | 30 thru 44     |
| 5. Spring          | VM14SC11/89 | All            |
| 6. Starter Plunger | VM15/62     | 24 thru 28     |
|                    | VM18/144    | 30 thru 44     |

### C. Cable Type

- Complete kit available that contains all parts for "C" cable type. See Cable Starter Kit below.

Complete Kit for Cable Choke 724-4751

- Individual pieces are also available:

|                    |             |            |
|--------------------|-------------|------------|
| 1. Rubber Cap      | VM26/46     | 30 thru 44 |
| 2. Cable Adjuster  | M18F/43     | 30 thru 44 |
| 3. Lock Nut        | B30/247     | 30 thru 44 |
| 4. Plunger Fitting | VM15/37     | 30 thru 44 |
| 5. Spring          | VM14SC11/89 | 30 thru 44 |
| 6. Starter Plunger | VM15SC4/85  | 30 thru 44 |

## FLOAT BOWLS

### Transparent Float Bowl

- Proper fuel level and harmful sediment visible
- Transparent drain plug

Float Bowl VM26-28

PB 26



### Adjustable Float Bowl

- Outside adjustment mechanism consists of an adjustable needle with a tapered seat which meters the fuel flow. The needle fine tunes the main jet enabling the user to lean or enrich the fuel mixture as desired

VM36 & 38 Mikuni Carbs

VM36/102B

O-Ring

BV32/04

Washer

VM20/169

Jet Setter

VM36/55

## MIKUNI FUEL PUMP RHINO REBUILD KIT



**Yamaha Rhino Fuel Pump Kit** MK-DF52-531

Contents:

- 1 Thick Rubber Gasket (DF42/105)
- 2 Clear Film Diaphragms (DF52-48/10)
- 2 Thin Rubber Gaskets (DF52-48/05) / (DF52/113)
- 1 Thick Fiber Gasket (DF52/27A)
- 2 Clear Valves (DF52/27A)
- 2 Black Grommets (DF44/26)

## CARBURETOR SCREWS

| DESCRIPTION                                      | TCI PART#  | THREAD DIAMETER | THREAD LENGTH |
|--|------------|-----------------|---------------|
| Standard Phillips Machine                        | C2=0406    | 4 mm            | 5 mm          |
|  | C2=0416    | 4 mm            | 16 mm         |
|  | C2=0518    | 5 mm            | 18 mm         |
| Countersunk Machine<br>Flush-Countersunk Machine | C6-0307    | 3mm             | 7mm           |
|  | C5-0414-G  | 4 mm            | 11 mm         |
| Std. Phillips Machine Washer                     | CW2=0305   | 3 mm            | 4 mm          |
|  | CW2=0308   | 3 mm            | 7 mm          |
|  | CW2=0310   | 3 mm            | 9 mm          |
|  | CW2=0406   | 4 mm            | 7 mm          |
|  | CW2=0408   | 4 mm            | 10 mm         |
|  | CW2=0412   | 4 mm            | 14 mm         |
|  | CW2=0414-B | 4 mm            | 12 mm         |
|  | CW2=0414   | 4 mm            | 15 mm         |
|  | CW2=0416   | 5 mm            | 15 mm         |
|  | CW2=0516   | 5 mm            | 18 mm         |
|  | CW2=0518   | 5 mm            |               |
|  |            |                 |               |

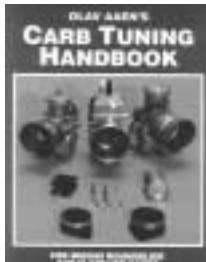


**Power Jet Kit MK-406**

560-MK406

- Power Jet Kits are used in two-stroke engine applications to improve mid-range throttle response and add additional fuel to wide open throttle running conditions, especially with snowmobile applications.
- Kit may be installed easily on Mikuni TM and VM Series Motorcycle and Snowmobile carburetors.

## MANUAL



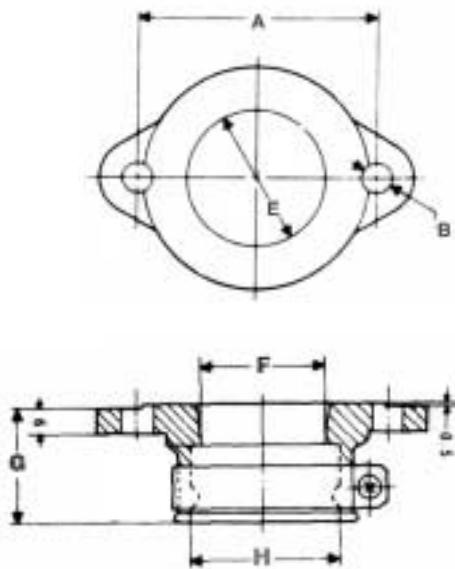
**Carb Tuning Handbook**

215-B16002

- This updated book covers the basics in carb tuning, testing, and racing. Mikuni's VM round slide carbs, TM flatside carbs, and the new TMX are discussed in detail.
- A must for those who want to get the most out of their engine. Learn how to diagnose your carbs performance, use correct testing procedures, and calibrate with the right tools.

## MIKUNI CARB MOUNTING FLANGES

- Most older snow machines that have common engines (Kolher, Xenoah, Kawasaki, CCW, etc) used standard Mikuni carbs or other carbs that can be switched to use Mikuni carbs.
- Use measurement chart to select correct flange.

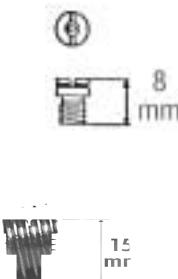


| TCI Part#     | A = Engine Mount Bolt Hole | B = Bolt Hole Size | F = Carb Bore Size | G = Flange Throat Depth | H = Carb Spigot Diameter | Typical Carb Size |
|---------------|----------------------------|--------------------|--------------------|-------------------------|--------------------------|-------------------|
| Mikuni Taiwan |                            |                    |                    |                         |                          |                   |
| 596-1003      | 60                         | 8.5 mm             | 30                 | 23                      | 35                       | VM26              |
| VM30/288      | 596-1001                   | 57                 | 8.5 mm             | 30                      | 23                       | VM26~28           |
|               | 596-1002                   | 74.6 (HD)          | 8.5 mm             | 29.5                    | 29                       | VM26~28           |
|               | 596-1008                   | 57.2 (HR)          | 8.5 mm             | 30                      | 40.5                     | VM26~28           |
| IVM28/200-1   | 60                         | 8.5 mm             | 30                 | 28                      | 35                       | VM26~28           |
| VM32/205      | 596-1013                   | 75                 | 8.5 mm             | 34                      | 32                       | VM30~34           |
| IVM34/200-1   | 596-1004                   | 60                 | 8.5 mm             | 36                      | 25                       | 40                |
|               | 596-1005                   | 60                 | 8.5 mm             | 39.5                    | 46                       | 39.5              |
| IVM36/200-1   | 596-1006                   | 70                 | 8.5 mm             | 40                      | 25                       | 43                |
| KHS-004       | 70-75                      | 11 mm              | 40                 | 28                      | 43                       | VM36~40           |
| IVM38/200-1   | 596-1014                   | 75                 | 8.5 mm             | 40                      | 28                       | 43                |
| IVM40/200-1   | 596-1015                   | 75                 | 8.5mm              | 46                      | 32                       | VM40~44           |
| IVM44/200-1   | 84                         | 11 mm              | 46                 | 26                      | 52                       | VM40~44           |
| HS42/01-42    | 70-75                      | 11 mm              | 42                 | 25                      | 45                       | VM42              |
| HS42/01-45    | 70-75                      | 11 mm              | 45                 | 25                      | 48                       | VM45              |
|               | 596-1007                   | 74.6 (HD)          | 8.5 mm             | 41.5                    | 52                       | 40                |
| HS42/01-48    | 70-78                      | 11 mm              | 48                 | 25                      | 51                       | VM48              |

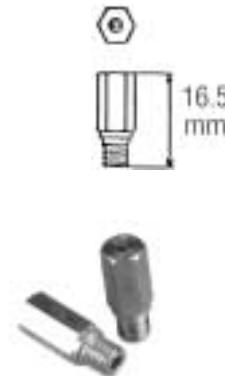
## MAIN JETS FOR KEIHIN

**TCI PART# 31-3 - JET SIZE**

- Thread 5.0mm x 0.80mm
- Length 8mm, OD 6mm
- Jet Size: (Increments)  
100 thru 200 (2,3,3,2 )  
(ie. 100, 102, 105, 108, 110)
- Keihin# N424-36
- Applications:  
Kawasaki - CDK, CDKII


**TCI PART# 31-4 - JET SIZE**

- Thread 5mm x 0.8mm
- Length 16.5mm
- Jet Size: (Increments)  
100 thru 220  
(ie. 100, 102, 105, 108, 110)
- Keihin# 99101-357
- Applications:  
Keihin - FCR, CRS  
Honda - PD, PE-34-38, PJ  
Kawasaki - PWK  
Harley - BD  
Yamaha - BD  
Polaris - PWK



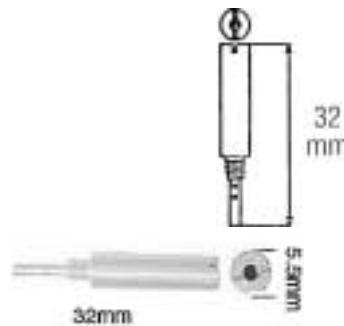
## SLOW JETS KEIHIN

**TCI PART# 31-2 - JET SIZE**

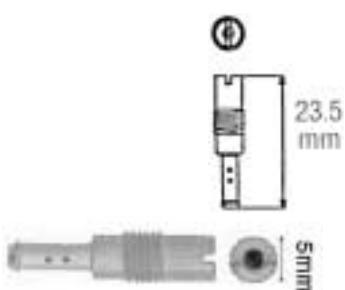
- Thread 6mm x 0.75mm
- Length 28mm
- Jet Size: (Increments)  
35 thru 80 (3,2,2,3 )  
(ie. 035, 038, 040, 042)
- Keihin# N424-21
- Applications:  
Honda - PJ, PE 26-30  
Kawasaki - PWK


**TCI PART# 31-1 - JET SIZE**

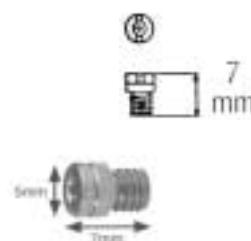
- Length 32mm
- OD 5.5mm
- Jet Size: (Increments)  
35 thru 80 (3,2,2,3 )  
(ie. 035, 038, 040, 042)
- Keihin# N424-24
- Applications:  
Keihin - CRS


**TCI PART# 31-5 - JET SIZE**

- Length 23.5mm
- OD 5mm
- Jet Size: (Increments)  
35 thru 80 (3,2,2,3 )  
(ie. 035, 038, 040, 042)
- Keihin# N424-26


**TCI PART# 31-6 - JET SIZE**

- Length 7mm
- OD 5mm
- Jet Size: (Increments)  
50 thru 120 (2,3,3,2 )  
(ie. 050, 052, 055, 058)
- Keihin# N424-35
- Applications:  
Kawasaki - CDK, CDKII


**TCI PART# 31-7 - JET SIZE**

- Thread 4.5mm x 0.75mm
- Length 45mm
- Jet Size: (Increments)  
38 thru 75 (3,2,2,3 )  
(ie. 035, 038, 040, 042)
- Keihin# N424-25
- Applications: CV, FCR

