

## Mikuni TMS38 Carburetor for Motocross Bikes



An evolution of the popular Mikuni TMX model, the Mikuni TMS38 Carburetor offers vastly improved mid-range and top-end performance with precise jetability. Design changes include a TMS flatslide throttle with no cutaway. Instead the slide has a specially designed internal chamber with two metering orifices. There is no screw-in pilot jet, and the pilot fuel is now metered by the jet needle. Tuning is quicker and more simplified with less components.

The installation of an optional special jet needle (the Pro Option Needle Kit shown below) in the TMS allows the main jet to be removed for even further performance. This special jet needle meters more fuel near the top of the needle jet where a substantial quality of fuel is available. This allows the air/fuel mixture to be more consistent, resulting in a even more noticeable performance increase.

Available as a complete kit, the 38mm Mikuni

TMS Carburetor is intended for use in off-road racing applications on 125cc, 250cc and two-stroke engines. Kit includes carb, throttle cable, airboot adapter, main jets, jet needles, hose, clamps, pocket tuner and instructions.

### Pro Option TMS38 Needles

Take your TMS38 one step further. The TMS38 eliminated the pilot jet system. By using special needles we can now eliminate the main jet. All tuning is accomplished with a special needle and the air screw. Final fuel metering has now become very precise at the needle jet outlet, providing quicker throttle response and more exact air fuel mixtures. (See Pg.140)



**TMX Series Carburetors** Mikuni designed the TMX Series particularly for 2-stroke engines in motocross, off-road bike and ATV racing applications. The TMX features a radial flat slide design, lightweight and compact body. Suggested applications are TMX35 for 125cc race engines and TMX38 for all Open Class machines.



Order No.	Mikuni No.	Main Jet	Pilot Jet	Jet Needle	Throttle Valve
001-034	TMX35-1	4/042 350	VM22/210 20	6EN11-53	999-832-014 6.0
001-182	TMX35-1	Special Set	Specify make/model or required jetting specifications.		
001-076	TMX38-18 (47mm O.D.)	4/042 370	VM22/210 20	6EJ12-55	999-832-014 3.5
001-184	TMX38-27	Special Set	Specify O.D., make/model or required jetting specifications.		
001-077	TMX38-27 (44MM O.D.)	4/041 370	VM22/210 20	6EJ12-55	999-832-014 3.5
001-189	TMX38-18	Special Set	Specify make/model or required jetting specifications.		

#### Needle Valves

002-466 (Standard)	786-36004	3.5 gravity flow
002-464 (Option)	786-36004A	1.8 fuel pump

#### Throttle Valves Cutaway

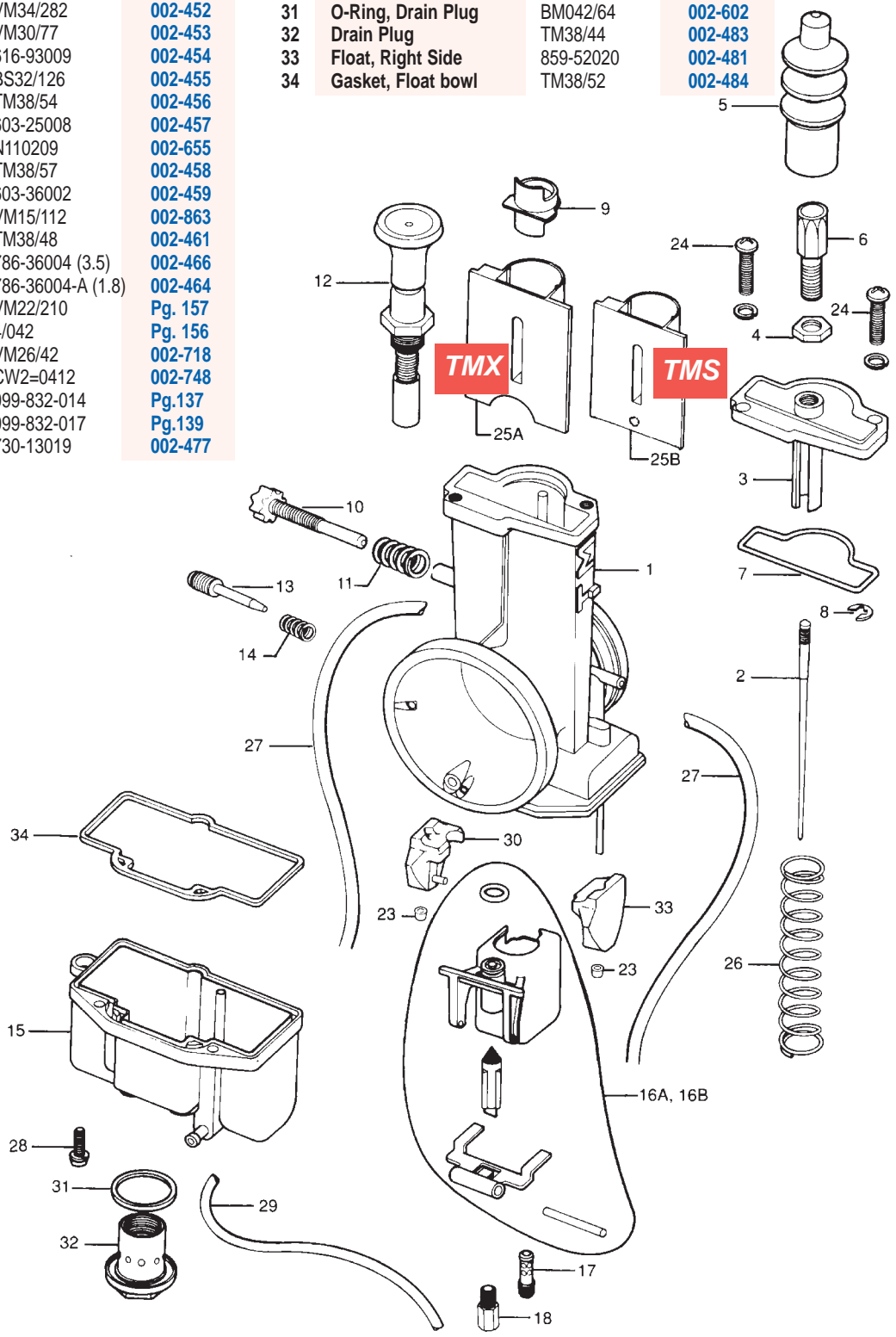
002-472	999-832-014	3.0
002-473		3.5
002-476		4.0
002-474		5.0
002-475		6.0

# MIKUNI TMS/TMX PARTS

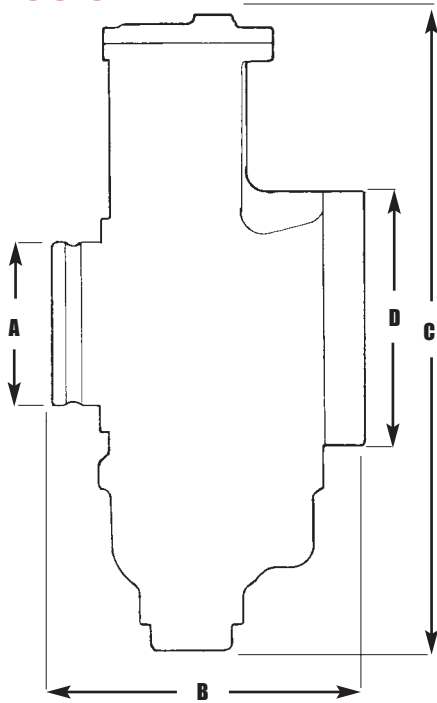
## TMX/TMS Series Carburetors TMX35 & 38, TMS38

No. Description	Mikuni No.	Order No.	No. Description	Mikuni No.	Order No.
1 Mixing Body Carb	N/A		27 Hose, Vent	888-24011	002-478
2 Jet Needle	J8	Pg. 140	28 Screw, Float Bowl	CW2=0308	002-479
3 Cover, Carb Top	776-19014	002-451	29 Hose Overflow	888-23022	002-480
4 Lock Nut, Adjuster	B30/247	002-065	30 Float, Left Side	859-52021	002-482
5 Cap, Rubber	VM34/282	002-452	31 O-Ring, Drain Plug	BM042/64	002-602
6 Adjustable Cable	VM30/77	002-453	32 Drain Plug	TM38/44	002-483
7 O-Ring, Top Cover	616-93009	002-454	33 Float, Right Side	859-52020	002-481
8 E-Ring, Needle Clip	BS32/126	002-455	34 Gasket, Float bowl	TM38/52	002-484
9 Ring, Retaining	TM38/54	002-456			
10 Adjuster, Idle Stop	603-25008	002-457			
11 Spring, Idle Adjust	N110209	002-655			
12 Plunger, Starter Ass'y	TM38/57	002-458			
13 Screw, Air Adjuster	603-36002	002-459			
14 Spring, Air Screw	VM15/112	002-863			
15 Chamber, Float Bowl	TM38/48	002-461			
16A Valve Seat, Needle Ass'y	786-36004 (3.5)	002-466			
16B Valve Seat, Needle Ass'y	786-36004-A (1.8)	002-464			
17 Pilot Jet	VM22/210	Pg. 157			
18 Main Jet	4/042	Pg. 156			
23 Cap, Float Retainer	VM26/42	002-718			
24 Screw, Top Cover	CW2=0412	002-748			
25A Throttle Valve TMX	999-832-014	Pg.137			
25B Throttle Valve TMS	999-832-017	Pg.139			
26 Spring T.V.	730-13019	002-477			

**Float Height  
20 mm**



## TMX/TMS Series Carburetor Dimensions (mm)



DIMENSION	MODEL	TMX35	TMX38-27	TMX38-18
		-1	TMS38-77	TMS38-78
A		40	44	47
B			76	
C			164	
D			62	
TOTAL WIDTH			76	

## TMS Throttle Valves

Engine	Description	Inlet Hole	Outlet Hole	Order No.
250cc	999-832-017 "1G"	2.0mm	1.4mm	007-410
125cc	999-832-017 "1H"	3.0mm	2.0mm	007-411

## TMX Throttle Valves (5.0) for Stock TMX38

Order No. **007-415**

(MI No. 832-41018-5.0)

Application: 2001 CR250 O.E.M. Carb



## Important Tuning Characteristics

### Jet Needle

The Jet Needle is the tapered rod that is positioned in the throttle valve by the 'E'-Clip. The taper of the needle increases the clearance between the Jet Needle and the fixed Needle Jet outlet as the throttle is opened. As the air flow volume increases past the throttle slide, the fuel volume is also increased to maintain the correct air/fuel ratio.

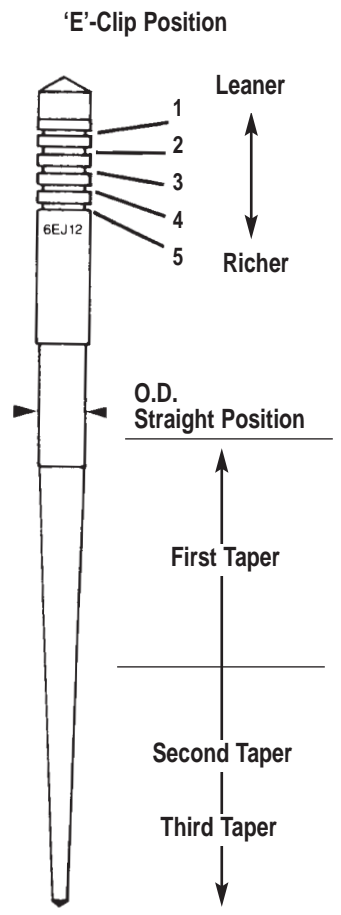
### Needle "E"-Clip Position

The position of the 'E'-Clip in the Jet Needle is used to correct or change the air/fuel ratio between 1/4th and 3/4th throttle valve position. The 'E'-Clip can be raised or lowered on the Jet Needle. To richen the fuel mixture the 'E'-Clip is lowered on the Jet Needle, raising the Jet Needle. To lean the fuel mixture the 'E'-Clip is raised on the Jet Needle.

### Jet Needles

To correct the fuel mixture at 1/8th to 1/4th throttle slide position it may be necessary to change the Jet Needle. The Jet Needle will have a series of numbers stamped on it.

Example: 6EJ12-55. The numbers 55 indicate that the outside diameter (O.D.) of the Jet Needle is 2.55mm. A smaller O.D. number gives a richer mixture. A larger O.D. number gives a leaner mixture.



## TMX Carb-Air Boot Adapter-TMX/001

An option available for TMX Carburetors, is this Air Boot Adapter, required for some applications when replacing a stock OEM carb with the TMX Carburetor.

**005-080** TMS Carb Airboot Adapter- TMX/006



Jet Needle No.	Needle Diameter	Order No.	Air Fuel Ratio
<b>TMX38 Flatside</b>			
6EJ12-60	2.60	007-077	LEANER ↑ ↓ RICHER
6EJ12-59	2.59	007-076	
6EJ12-58	2.58	007-075	
6EJ12-57	2.57	007-074	
6EJ12-56	2.56	007-073	
6EJ12-55	2.55	007-072	
6EJ12-54	2.54	007-071	
6EJ12-53	2.53	007-070	
<b>TMX35 Flatside</b>			
6EN11-58	2.58	007-056	LEANER ↑ ↓ RICHER
6EN11-57	2.57	007-055	
6EN11-56	2.56	007-054	
6EN11-55	2.55	007-053	
6EN11-54	2.54	007-052	
6EN11-53	2.53	007-051	
6EN11-52	2.52	007-050	
<b>TMS38-77, 78 125cc</b>			
6GDY12-59	2.59	007-088	LEANER ↑ ↓ RICHER
6GDY12-58	2.58	007-087	
6GDY12-57	2.57	007-086	
6GDY12-56	2.56	007-085	
<b>TMS38-77, 78 250cc</b>			
6DGY04-60	2.60	007-048	LEANER ↑ ↓ RICHER
6DGY04-59	2.59	007-047	
6DGY04-58	2.58	007-046	
6DGY04-57	2.57	007-045	
6DGY04-56	2.56	007-044	
6DGY04-55	2.55	007-043	
6DGY04-54	2.54	007-042	

### Pro Option Needles - TMS38

FOR 125 AND 250 CC ENGINES WITHOUT MAIN JETS THRU 1992  
Each kit contains a selection of 5 different needles.

#### Needle Part Numbers

125 cc = J8-6EL 11-15

250 cc = J8-6 CEM01-05

(400) (390) (380) (370) (360)  
11 or 12, 13, 14, 15 (400-360)  
(380) (370) (360) (350) (340)  
01 or 02, 03, 04, 05 (380-340)  
(360) (370) (360) (350) (340)

Kit No.	Needle Diameter	Air/Fuel	Main Jet Equivalent	Order No.
<b>125 CC</b>				
TMS-JN125/56	2.56 mm	RICHER ↑	400, 390, 380, 370, 360	007-091
TMS-JN125/57	2.57 mm	↑ ↓	400, 390, 380, 370, 360	007-092
TMS-JN125/58	2.58 mm	LEANER ↓	400, 390, 380, 370, 360	007-093
<b>250 CC</b>				
TMS-JN250/57	2.57 mm	RICHER ↑	380, 370, 360, 350, 340	007-095
TMS-JN250/58	2.58 mm	↑ ↓	380, 370, 360, 350, 340	007-096
TMS-JN250/59	2.59 mm	LEANER ↓	380, 370, 360, 350, 340	007-097

#### Important Note:

If your current correct jetting using a TMS Carb falls within this guideline table, you may achieve improved performance with the pro-option kit. Example: TMS 38 with 6DGY04-57 and 360 main jet, choose TMS-JN250/57.

### OEM TMX36/38 Needles (633 Series)

For OEM Honda CR125 '00-'01 and CR250 '01



Order No.	Size	Leaner
003-720	S-4	↑ ↓ RICHER
003-722	S-7	
003-723	S-8	
003-724	S-9	