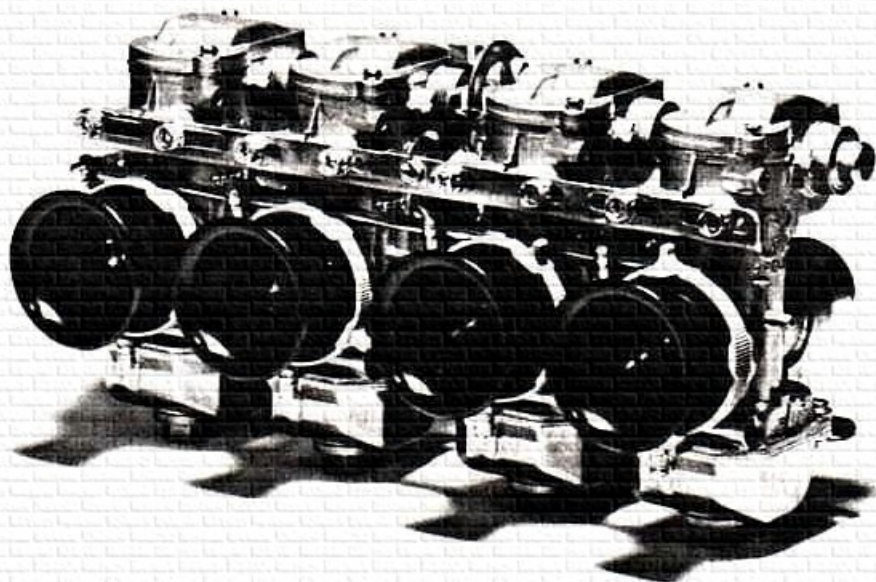


## KEIHIN CR-SPECIAL OWNER'S MANUAL



Available from **SUDCO INTERNATIONAL CORP.**, the **KEIHIN** (pronounced KAY-HEEN), CR-SPECIAL smoothbores, choice of champions throughout the world.

These carburetors feature superb response from idle to full throttle while making more horsepower with easier adjustability than any other carburetor.

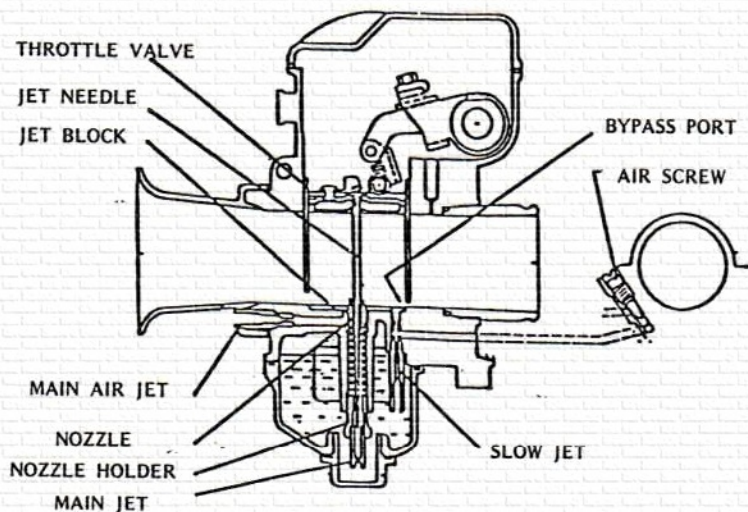
- Available in 26, 29, 31, 33, 35, 37, 39mm sizes
- A third less weight than stock carburetors
- Adjustable throttle positions (60°-90°)
- Main and Air Jets accessible without removing carburetors
- Needle changes possible in less than two minutes
- Choke and full-idle circuits
- Wide range of jets and tuning parts available
- Produced by KEIHIN, originator of the "smoothbore" carbs



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Congratulations! You are now a proud owner of a KEIHIN CR-SPECIAL Carburetor Set, a vastly superior smoothbore carburetor created with maximum performance and easy tuning in mind. Unlike other smoothbores, it is not a modified bored out version of a stock carburetor. No compromise was ever necessary in its design, because CR-SPECIAL is made from its own unique casting. It is manufactured by KEIHIN, a technologically advanced carburetor company.

The CR-SPECIALS are pre-set by SUDCO INTERNATIONAL CORP. to work at its optimum in most parts of the U.S.A. Whether the intended use is for street or for all out drag racing, after you experience the power of CR-SPECIAL for yourself, you will be convinced that you made the right choice.



#### BORE SIZE SELECTION

The chart below shows the general recommended venturi size for four cylinder engines by engine displacement. Depending upon make and model, stock engines may use a smaller bore size than shown and a fully tuned race engine may use one size larger.

ENGINE DISP. (cc)	550	650	750	1000 cc - up
VENTURI SIZE (mm)	26mm	29mm	31mm	33, 35, 37, 39mm

#### THROTTLE CABLE

CR-SPECIAL Carburetor Set is designed for use with dual throttle cables. It is highly recommended that bikes with single cable throttle be modified to a push-pull type dual cable system. There is a potential danger in using a single cable in that the strong vacuum suction may not allow the throttle valve to close to its closed position.



## NEEDLE JET

On the primary Choke type, as in the CR-SPECIALS offered by SUDCO, the Needle Jet is part of the Nozzle Holder.

KEIHIN offers a Screen Type and Flat Type of Needle Jets. However, the Flat Type comes standard in all CR-S from SUDCO. We have found both street and racing applications that the Flat Type is more efficient in the CR-S carburetors. In any case, the Needle Jet is not a calibration parts and jetting should be done by changing the Needle (Jet Needle).

## NEEDLE

The Needle has four factors:

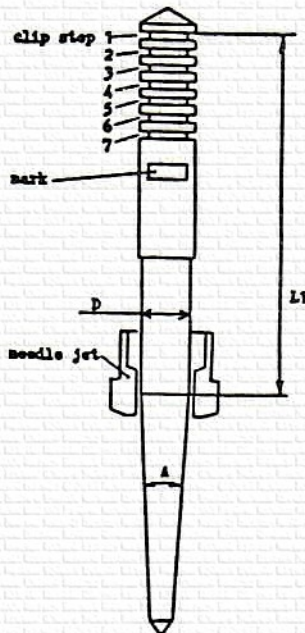
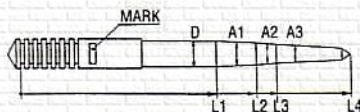
1. Straight portion diameter (D)
2. Clip step
3. Straight portion length (L1)
4. Taper (A)

The fuel flow is metered at the opening between the Needle and the Needle Jet.

## MULTI-TAPER NEEDLE

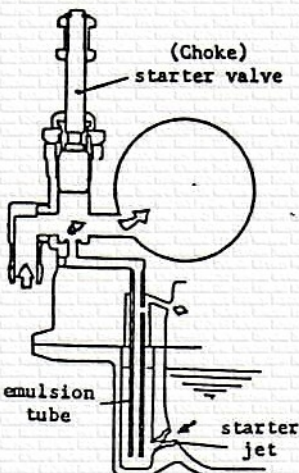
	Mark	D	A&L
Richer ↑ ↓ Leaner	Y5	2.755	Specs same for all Y Needles A1 = 0°50' A2 = 3°30' A3 = 1°30' L1 = 50.3 L2 = 60.3 L3 = 65.3 L4 = 83.3
	Y6	2.765	
	Y7	2.775	
	Y8	2.785	
	Y9	2.795	
	Y0	2.805	
	Y1	2.815	
Richer ↑ ↓ Leaner	YY5	2.755	Specs same for all YY Needles A1 = 0°50' A2 = 3°30' A3 = 1°30' L1 = 53 L2 = 63 L3 = 68 L4 = 86
	YY6	2.765	
	YY7	2.775	
	YY8	2.785	
	YY9	2.795	
	YY0	2.805	
	YY1	2.815	
	YY2	2.825	
	YY3	2.835	

YY and YY Needles are available in .01mm diameter increments. YY is 2.7mm longer than Y.



## STARTER VALVE (Enricher Valve)

Richness at Starter Valve "ON" is adjusted by the Starter Jet.



### CR-SPECIAL STANDARD JETTING SPECS

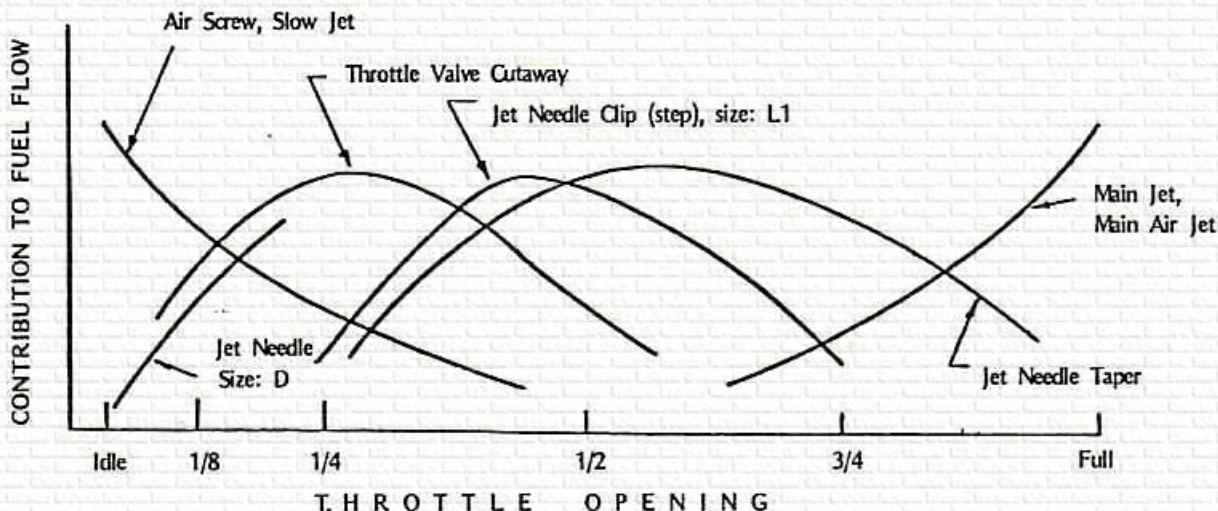
Setting Part	39mm	37mm	35mm	33mm	31mm	29mm	26mm
Main Jet	135	130	125	120	120	120	105
Air Jet	230	230	230	230	240	250	220
Throttle Valve	2.0	2.0	2.5	3.0	3.0	2.5	2.0
Needle	4478	5179	5179	YY8	YY8	YY8	YY0
Clip Position	3	4	4	4	4	4	4
Slow Jet	65	65	65	58	65	60	65
Valve Seat	3.2	3.2	3.2	3.2	3.2	3.2	2.4
Starter Jet	50	50	50	50	50	45	45

### FUNCTION OF JETTING COMPONENTS

Setting Part	To Make Richer	Recommended Increment For Change
Main Jet	use larger number	2 or 3 numbers
Main Air Jet	use smaller number	10 numbers on Primary
Slow Jet	use larger number	2 or 3 numbers
Air Screw	turn clockwise	1/4 turn
Throttle Valve Cutaway	use smaller number	.5mm
Jet Needle	use skimmier one	see Jet Needle section

### CONTRIBUTION OF JETTING COMPONENTS

Each calibration parts controls fuel flow at a different throttle opening. The diagram below will give you an idea which calibration part is the key at various throttle openings.



Note: Some gas tanks have one fuel line and another for vacuum. Eliminate the vacuum line (usually thinner), connect the fuel line to the carb and find a position on the petcock (usually PRIME) where fuel flows at all times.

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