

General Catalog **No.22**

# **AUTOMOTIVE SERVICE TOOLS**



**TOYO TECH CO.,LTD.**

# I N D E X

## Compression tester

For gasoline engine	G-1C		2
	GU-2C		2
	GU-3H		2
	GU-51C		3
	GU-53C		3
	GU-6		3
For diesel engine	DS-9	Set for medium-size car	4
	DL-9	Set for large-size car	4
	DJ-9H	Set for glow plug	4
	DF-5·DF-6	Set for agricultural machine	5
	DK-7·DK-4	Set for industrial machine and construction machine	5
	Table of adapters		6~8

## Vacuum tester

	VP-3H	Handy vacuum pump	9
	VG-7B	Vacuum tester	9
	VG-8	Vacuum tester	9
	VF-3B	Vacuum fuel pump tester	10
	VT-4B	Four gauge vacuum tester	10
	TB-3-1·TB-3-2	Compound gauge	11
	DV-10	Vacuum tester for diesel engine	11
	Adapter for vacuum tester		11

## Radiator cap tester

	RC-3B	Radiator cap tester	12
Adapter	RC-3BL	Adapter for large-size car	12
	RC-3BS·RC-4BS	Lock-type (Hook-type) adapter	12
	RC-3BTC·RC-3BMZ	}	13
	RC-3BN·RC-3BP		13
	RC-3BW·RC-3BW1		13
	RC-3BW2·RC-3BO		13
	RC-3BC		13
	RC-3BFG·RC-3BGM		14
	RC-3BMB·RC-3BJG		14
	RC-3BRV·RC-3BVW		14
	RC-3BPG·RC-3BFT		14
	RC-3BAR		14

## Measuring instruments of fuel pressure

	PG-10D	Fuel pressure indicator (for Japanese car)	15
	PGS-10C	Fuel pressure indicator (for foreign car)	15
	Adapters for Fuel pressure indicator	For PG-10D and PGS-10C	16
	LP-1	Fuel pressure indicator for LPG car	16

## Measuring instruments of hydraulic pressure

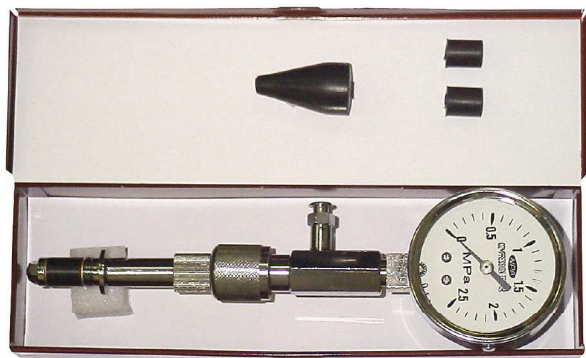
	CT-2	Hydraulic gauge (for low pressure)	17
	CT-2H·3H·3.5H·5H·7H	Hydraulic gauges (for high pressure)	17
	CT-3S	Triple set of hydraulic gauges (for low and high pressure)	17
	Throttle device for hydraulic gauge (buffer screw)		17

## Inspection and maintenance instruments

	AT-3	Hydraulic pressure gauge for automatic transmission	18
	PS-150	Power steering pressure gauge	18
	BC-4WD	Brake hydraulic pressure tester	19
	BT-2·3A·3H·4	Brake booster tester	19
	BMT-70	Brake master tester	20
	DI-50·DI-50B	Nozzle tester	20
	VR-1	Air valve lapper	21
	Hand valve lapper		21

# Compression tester for gasoline engine

## G-1C



Measurement can be made by a single person since the tester can be secured in close contact with a measured object by inflating the 14mm rubber at the end of the tester by turning the adjust nut (only when used for the 14mm spark plug). In the case of a vehicle with a plug other than the 14mm spark plug, the tester can be used as a manual pressure contact type by replacing the 14mm rubber with the provided V rubber.

Model	Meter diameter	Max. scale	Min. scale	Overall length	Accessories	Case	Total weight
G-1C	φ 60mm	2.5MPa (Approx. 25kgf/cm <sup>2</sup> )	0.1MPa	220mm	14mm rubber (spare) (2) V rubber (1)	Metal case W 235 × D 75 × H 45mm	Approx. 800g

### ☆ Optional adapter

G-1C 18mm diameter V rubber

## GU-2C



## GU-3H



Measurement can be made by a single person since this tester can be secured in close contact with a measured object by inflating the 14mm rubber at the end of the stem by turning the adjust nut (only when used for the 14mm spark plug). Since the stem can be easily attached and detached by means of the adjust nut, the tester can be used with various vehicle types by fitting either the long stem or short stem depending on the position of a plug hole. In the case of a vehicle with a plug other than the 14mm spark plug, the tester can be used as a manual pressure contact type by replacing the 14mm rubber with the provided V rubber.

The attached hose allows convenience in setting the compression tester. The tester can be used for extensive applications by fitting any of the three provided stems (long, short or curved stem) depending on the position of a plug hole. The use of the optional system separately sold allows the use of this tester for a wider variety of vehicle types.

Model	Meter diameter	Max. scale	Min. scale	Overall length	Accessories	Case	Total weight
GU-2C	φ 60mm	2.5MPa (Approx. 25kgf/cm <sup>2</sup> )	0.1MPa	970mm	Long stem 220mm 14mm rubber (Spare) (2)	Metal case W 290 × D 165 × H 70mm	Approx. 2,100g
GU-3H	φ 75mm	2.5MPa (Approx. 25kgf/cm <sup>2</sup> )	0.1MPa	970mm	Short stem 99mm V rubber (2)	Metal case W 290 × D 165 × H 70mm	Approx. 1,850g

### ☆ Optional adapter

GU-2C Special stem : 150mm, 200mm, 250mm, 300mm, 400mm, 500mm 18mm diameter V rubber

GU-3H Straight stem 200mm, 300mm, 400mm, 500mm Curved stem 200mm, 300mm, 400mm, 500mm  
18mm diameter V rubber

# Compression tester for gasoline engine

## GU-53C



## GU-51C



Measurement can be made by a single person since this compression tester can be secured by screwing the hose adapter into the spark plug hole. Screwing of the hose adapter into the spark plug hole can be performed just by hand requiring no tool. The hose adapter can be connected to and disconnected from the tester main body by means of a coupler quickly and easily. The long hose adapter as long as 400mm allows easy connection even to a deeply set spark plug like the DOHC. With three types (10mm,12mm,14mm) of hose adapters provided, this tester can be used with most of reciprocating engines from a two-wheeled vehicle to a four-wheeled car.

This tester is an equivalent of GU-53C shown on the left and provided with only one hose adapter for the 14mm spark plug often used for four-wheeled cars.

※Purchase a hose adapter separately sold according to need.

### Specifications

Model	Meter diameter	Max. scale	Min. scale	Overall length of tester body	Provided adapter (Overall length)	Accessories	Case	Total weight
GU-53C	φ 60 mm	2.5MPa (Approx. 25kgf/cm <sup>2</sup> )	0.1MPa	170 mm	For 10mm plug (400mm)	Spare O-ring for 10, 12, and 14mm (one for each)	Metal case W 290 × D 165 × H 70mm	Approx. 1,850g
					For 12mm plug (400mm)			
GU-51C					For 14mm plug (400mm)			Spare O-ring for 14mm (1)

#### ☆ Optional adapter

For 18mm spark plug / For 8mm spark plug

For 14mm taper-seal type spark plug (Ford)

[For a special adapter for special spark plug etc., contact us for detailed information.]

## GU-6



Many of natural gas fueled cars like CNG cars are subjected to higher compression pressure compared with gasoline cars. This compression tester allows the measurement of higher compression pressure for these vehicles. To enhance the heat resistance required for the measurement of higher compression pressure, heat dissipation performance is improved by the use of heat-dissipating materials and shape on the end part.

Measurement can be made by a single person since this tester can be secured by screwing the hose adapter into the spark plug hole. This tester can be used for various types of plugs by fitting any of the three types (10mm, 12mm, 14mm) of the provided plug adapters.

### Specifications

Model	Meter diameter	Max. scale	Min. scale	Overall length of tester body	Provided adapter (Overall length)	Case	Total weight
GU-6	φ 60 mm	4 MPa (Approx. 40kgf/cm <sup>2</sup> )	0.1MPa	370 mm	For 10mm plug (65mm) For 12mm plug (65mm) For 14mm plug (65mm)	Metal case W 290 × D 165 × H 70 mm	Approx. 1,500g

# Compression tester for diesel engine

This compression tester allows the measurement of compression by connecting a provided appropriate adapter to the nozzle holder or glow plug of a diesel engine. A set of seven types of adapters is available for applicable car types (engine models), and for nozzle holders or glow plugs. There are also a variety of optional adapters available. (See the attached table.)

## Common specifications

Meter diameter	Max. scale	Min. scale	Tester overall length	Accessories
φ 75mm	7MPa (Approx. 70kgf/cm <sup>2</sup> )	0.2MPa	For use with hose of 610mm	Fiber packing 13mm dia. (For connecting a hose and tester) Fiber packing 14mm dia. (For connecting an adapter) 5 for each

### DS-9 For medium-size car (For nozzle holder)



#### Provided adapter

Adapter model	Manufacturer	Engine model
I - 10	Isuzu	4HF1,4HG1,4BE1
I - 13		4EE1,4JG2,4FC1,4FG1,4EF1,4EC
T - 5	Toyota	1C,2C,3C,L,2L,3L,5L,1KD,1KZ
F - 11	Mitsubishi	4D30,4D31,4D32,4D33,4D34,4D35,4D36
F - 15		4M50,4M51
M - 2	Mazda	RF,R2,S2

#### Accessories : L-Type joint

- Specifications : Metal case W 335×D 225×H 55mm  
Total weight Approx.3,680g

### DL-9 For large-size car (For nozzle holder)



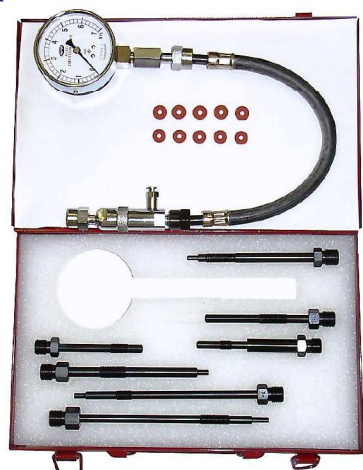
#### Provided adapter

Adapter model	Manufacturer	Engine model
I - 5	Isuzu	6WA1,6WG1,4BA1,4BC1,4BD1,6BA1,6BD1
I - 15		8PD1,10PD1,8PE1,10PE1
N - 8	Nissan	FD42,FD46,BD30
H - 13	Hino	S05C,S05D,J05C,J05D,J07C,J08C
H - 15		P09C,P11C,K13C
F - 13	Mitsubishi	6M70,8M20,8M21,8M22
F - 14		6M60,6M61

#### Accessories : L-Type joint

- Specifications : Metal case W 370×D 270×H 55mm  
Total weight Approx.5,680g

### DJ-9H For glow plug



#### Provided adapter

Adapter model	Manufacturer	Engine model
G I - 6	Isuzu	6HH1,6HL1,6HK1,4HJ1,4HL1
G T - 3	Toyota	1C,2C,3C,B,2B,3B,H,2H,D,2D,2J,1PZ,1HZ,1HD
G T - 6		1ND
G N - 8	Nissan	SD20
G N - 10		ZD
G M - 5	Mazda	RF,S2,R2,VS,XA,HA,ZB
G H - 1	Hino	J05C,J05D,J07C,J08C,S05C,S05D

- Specifications : Metal case W 335×D 225×H 55mm  
Total weight Approx.2,750g

## DF-5 For agricultural machine (For nozzle holder)



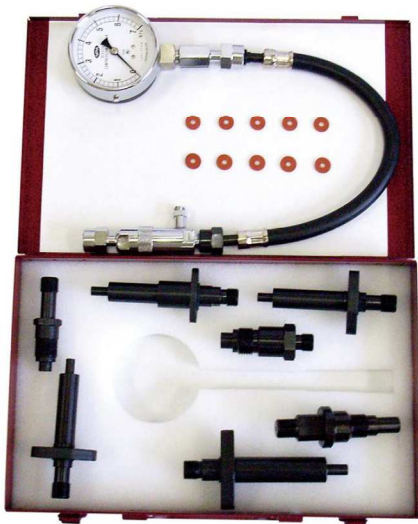
### ■ Provided adapter

Adapter model	Manufacturer
Y-1	Yanmar
KI-1	Iseki
KU-1	Kubota
MF-5	Mitsubishi

### ■ Accessories : L-Type joint (L-1)

- Specifications : Metal case W 335×D 225×H 55mm  
Total weight Approx. 3,500g

## DF-6 For agricultural machine (For nozzle holder)



### ■ Provided adapter

Adapter model	Manufacturer	Engine model
Y-1	Yanmar	2HS,NF,2TR,2T,3T,4T
Y-2	Yanmar	3TN63 ~ 3TN72
Y-3	Yanmar	3TNB80RN,3TN84RA,3TN84RB
Y-4	Yanmar	NFD150,NFD170,NF19,3T93,4T93
Y-5	Yanmar	NFAD50,NFAD5,NFAD6,NFD120,NFAD7,NFAD8
Y-6	Yanmar	L35,L40,L50,L60,L75,L90
Y-7	Yanmar	3TN75,3TNB82U,3TNB84U

- Specifications : Metal case W 335×D 225×H 55mm  
Total weight Approx. 3,760g

## DK-7·DK-4 For industrial machine and construction machine (For nozzle holder)



### ■ Specifications of provided adapter

	Adapter model	Manufacturer	Type	Case	Total weight
DK-7	K-1	Cummins	855	Metal case W 370 × D 270 × H 55 mm	Approx. 6,400 g
	K-2	Komatsu	94-1		
	K-3	Cummins	743		
	K-4	Komatsu	105-1,105-2,105-3		
	K-5		120-11,130-1,		
	K-6		92-1,		
	K-7		155-4		
DK-4	K-8	UK Inter		Metal case W 290 × D 165 × H 70 mm	Approx. 3,400 g
	K-9	Komatsu	2D92,4D92		
	K-10	Germany Inter			
	K-11	Perkins			

※ The photo shows Model DK-7.

# Compression tester for diesel engine

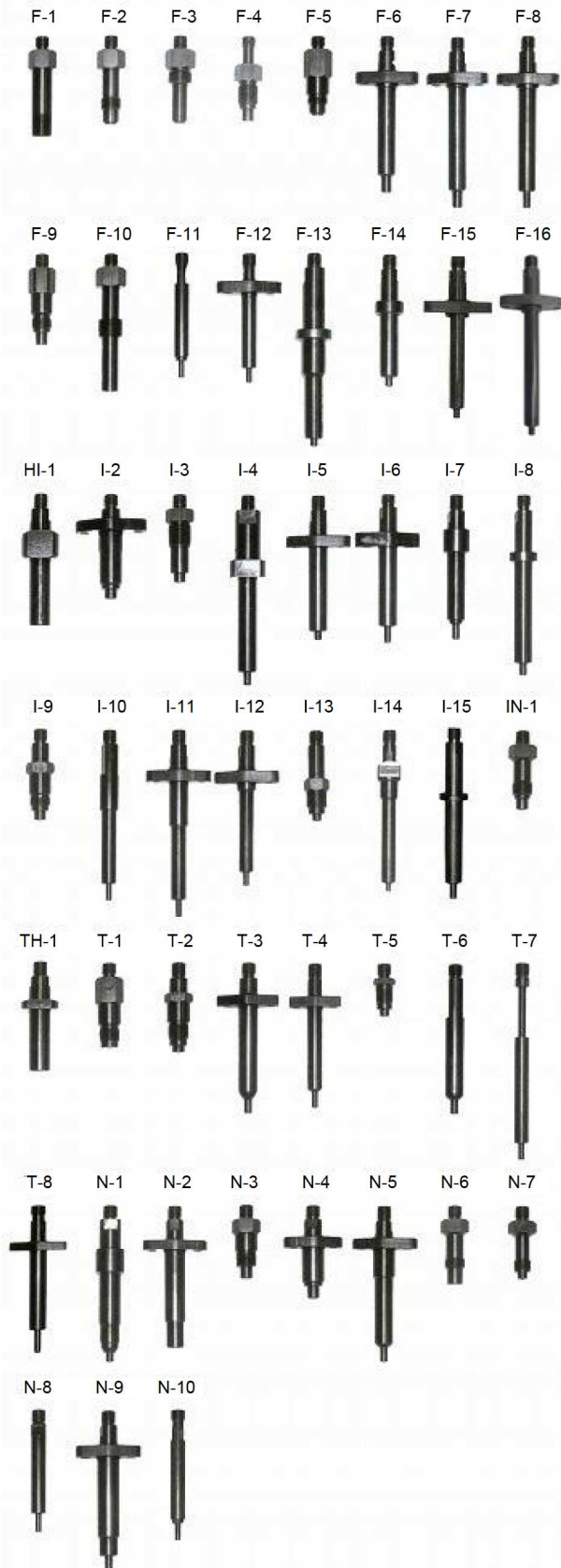
## Table of adapters

### ■ L-type adapter



The L-type adapter is used to connect between an adapter and tester when it is difficult to install a tester because the engine room is small or for any other reason.

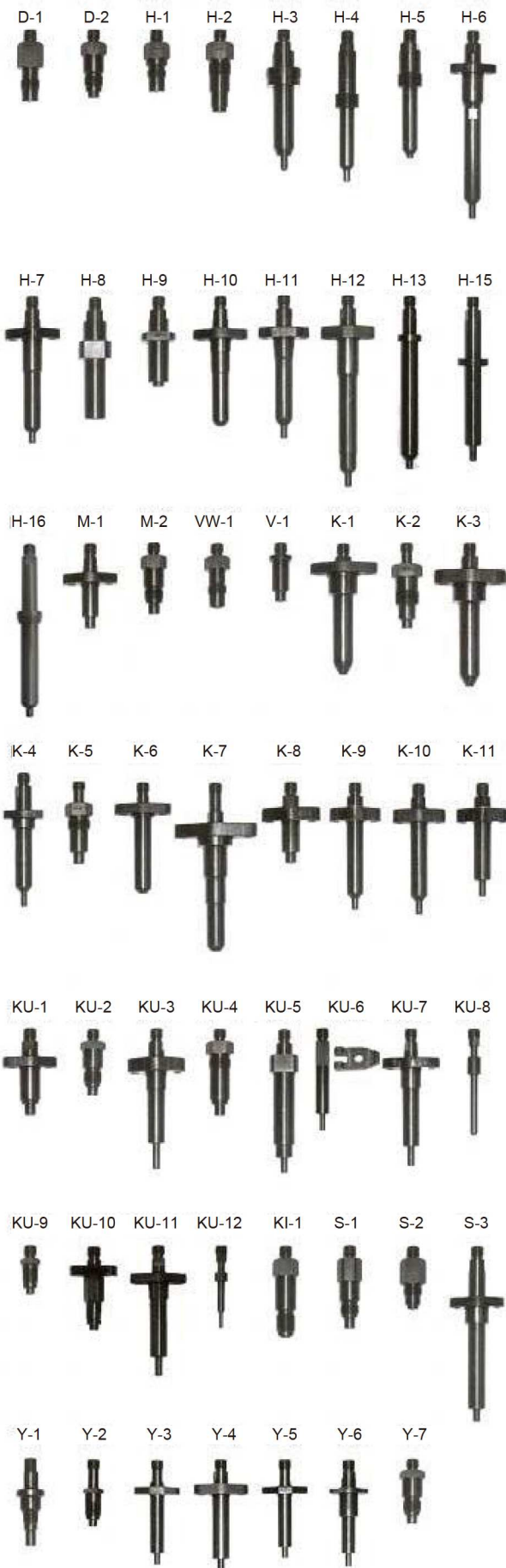
### ■ For nozzle hose



Adapter model	Engine model	Manufacturer
F-1	KE-35, KE-36, KE-41, KE-63	Mitsubishi
F-2	6DB1, 6DS1, 6DS10A	
F-3	6D11, 6DB10C, 6DS50C, 6DS70C	
F-4	4DQ, 4DR5, 4DR51	
F-5	8DC2	
F-6	6D14, 8DC4, 8DC6, 8DC20, 8DC60C	
F-7	8DC70, 8DC8	
F-8	6D16, 6D20, 6D22, 6D24, 8DC7, 8DC8	
F-9		
F-10	6DB (low-floor type)	
F-11	4D30, 4D31, 4D32, 4D33, 4D34, 4D35, 4D36	
F-12	4D31C	
F-13	6M70, 6D40, 8M20, 8M21, 8M22	
F-14	6D15, 6D16, 6D17, 6M60, 6M61	
F-15	4M50, 4M51	
F-16	4M50 (Common Rail)	
HI-1	DA120, DA220, DA640, DH100, E110	Isuzu
I-2	C330, D400, D500, 6AB1	
I-3	C221, C240, 2AB1	
I-4	E120, 6RA1	
I-5	4BA1, 4BC1, 4BD1, 6BA1, 6BB1, 6BD1, 6DB11, 6WA1, 6WG1	
I-6	D920, 6B-1	
I-7	8PA1, 8PB1, 8PC1N, 10PA1, 10PB1, 12PA1	
I-8	8MA1	
I-9	4EC1, 4FB1, 4FC1, 4FD1	
I-10	4BE1, 4HF1, 4HG1	
I-11	4HF1	
I-12	6BG1, 6BF1	
I-13	4EF1, 4FC1, 4FG1, 4JG2, 4EE1	
I-14	4HF1, 4HG1	
I-15	8PD1, 8PE1, 10PD1, 10PE1	
IN-1	C170	Nissan
	SD22, SD23, SD25, SD33	
TH-1	2D	Toyota
T-1		
T-2	B, J, 2J	
T-3	1W (Flange type)	
T-4	1Z, 11B, 12HT, 13B, 14B, 15B	
T-5	1C, 1KD, 1KZ, 2L, 3L, 4B, 5L	
T-6	WL	
	4D55, 4D56, 4D65, 4M40	Mitsubishi
T-7	1W (Hook type)	Toyota
T-8	B, 2B, 3B, 2H, 1HD-T, 1HZ, 1PZ	
N-1	2Z	Nissan
N-2	UD	
N-3	PD8T, PE10T, ND6	
N-4	ED6, ED30, ED33, CD17, CD20, RD28	
N-5	SD20	Isuzu
	FD6, FD33, RE10	
N-6	4BB1	V.W
N-7	CY turbo	Nissan
N-8	TD27, TD42, QD32	
N-9	BD30, FD42, FD46	
N-10	NF6, PF6, PN6, RE8, RF8, RG8	
	FE6B, FE6E	

# Compression tester for diesel engine

## ■ For nozzle hose

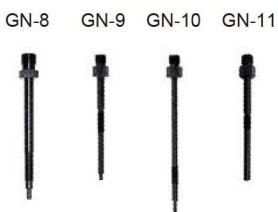


Adapter model	Engine model	Manufacturer
D-1		
D-2	CL-10, CL-50	Daihatsu
H-1	DM100	Hino
H-2	EC100, DQ100 10DC60P	Mitsubishi
H-3	EA100	
H-4	ED100	
H-5	EF100, EG100, EH100, EH500	
H-6	EF300, EF500, EF700, EK100	
H-7	EH700, EM100, EP100T, H06CT, H07C, W04CT, W04D, W06D, W06E	
H-8	EB100, EB300, DK10, DK20	
H-9	DS50, DS60, DS70, DS80, DS120	Hino
H-10	EL100	
H-11	EP100	
H-12	EF550P	
H-13	J05C, J05D, J07C, J08C, S05C, S05D	
H-15	K13C, P09C, P11C	
H-16	E13C	
M-1	XA, HA, ZB, XC	Mazda
M-2	RF, R2, S2	
VW-1		V. W.
V-1		Volvo
K-1	855	Cummins
K-2	94-1	Komatsu
K-3	743	Cummins
K-4	105-1, 105-2, 105-3	
K-5	120-11, 130-1	
K-6	92-1	Komatsu
K-7	155-4	
K-8	W,V	UK Inter
K-9	2D92, 4D92 177	Komatsu
K-10		Germany Inter
K-11		Perkins
KU-1	ER80, ER90, ER100, KND3, KND4, KND45	
KU-2	E50, E55, E60, E70, ZB400C	
KU-3	D3000, V4000, V4300	Kubota
KU-4	D1900, DS1500	
KU-5		Mitsui Germany
KU-6	E750, E900, E950, E1000	
KU-7	E1100, E1150, E1250, KND2800, KND3200 4BC2	Isuzu
KU-8	D1302DI, D1402DI, V1512DI	
KU-9	Z430, D600	
KU-10		Kubota
KU-11		
KU-12		
KI-1		Kawasaki Iseki
S-1	SD460, SD4003	
S-2	SD3203, SE5306	
S-3	SF1000T, SE8300	
Y-1	2HS, NF, 2TR, 2T, 3T, 4T	
Y-2	3TN63 ~ 3TN72	
Y-3	3TNB80RN, 3TNB84RA, 3TNB84RB	
Y-4	NFD150, NFD170, NF19, 3T93, 4T93	Yanmar
Y-5	NFAD50, NFAD5, NFAD6, NFD120, NFAD7, NFAD8	
Y-6	L35, L40, L50, L60, L75, L90	
Y-7	3TN75, 3TNB82U, 3TNB84U	



# Compression tester for diesel engine

## ■ For glow plug



Adapter model	Engine model	Manufacturer
GF-1	4DG, 6DB1	Mitsubishi
GF-2	6DB, 6DS, 6DC	
GF-3	6DC2, 6DC20, 8DC2, 8DC20, 8DC6, 10DC6, 12DC2	
GF-4	4DR1, 4DR5, 4DR51, 6DR5	
GF-5	6DB1, 6DB10A, 6DS1, 6DS10A, 6DS3, 6DS5, 6DS7	Mazda
	XC, ZC	
	4JG2	Isuzu
GF-7	6D10, 6D11	Mitsubishi
GF-8	4D30, 4D31	
GF-9	4DR6, 4D32, 4D33, 4D35, 4D34	
GF-10	6M60	
GI-1	KE31, KE36	Isuzu
	C220	
GI-2	C190, C221, C223, C240, C330, D500, 4BA1	Isuzu
	4BC1, 4EC1, 4FE1, 4FB1, 4FC1, 4FD1, 4FG1	
GI-3	D400, DA120, DA640, DH100, E110	Isuzu
GI-4	C190, C221, C223, C240, C330, D500, 4BA1	
	4BC1, 4EC1, 4FE1, 4FB1, 4FC1, 4FD1, 4FG1	
GI-5	4BB1, 4BC2, 4BD1, 4BE1, 4BG1, 4BJ1-2, 4FE1, 4HE1, 4HF1	
	4HJ1, 4JA1, 4JB1, 6BB1, 6BD1, 6BF1, 6BG1, 6HE1, 6HH1	
GI-6	4HJ1, 4HL1, 6HK1, 6HL1, 6HH1	Isuzu
GI-7	4JJ1, 4JX1	
GH-1	J05C, J05D, J07C, J08C, S05C, S05D, N04C	Hino
	4M50, 4M51	
GS-1		Mitsubishi
GT-1	1C, 2C, 2B, 3B, 2H, 2D, 2J, 1PZ, 1HZ, 1HD	Toyota
	CL10, CL30, CL50, CL70, DG, DL, DL50	Daihatsu
GT-2	L, 2L, 2L-T, 3L, 1N	Toyota
GT-3	1C, 2C, 2B, 3B, 2H, 2D, 2J, 1PZ, 1HZ, 1HD, 3C, 4B, 1KZ	Daihatsu
	CL10, CL30, CL50, CL70, DG, DL, DL50	
GT-4	1W	Toyota
GT-5	L, 2L, 2L-T, 3L, 1N, 5L	
GT-6	1ND	
GT-7	2KD	
GN-1		Nissan
GN-2	SD20, SD22, SD23, SD25, SD33, SD33T	Kubota
	V2203, V1200	
GN-3	LD20, LD28	Nissan
	CK, CR	V.W
GN-4	CD17	Nissan
GN-5	CD17, TD23, TD27, TD42, QD32, TD25	Mitsubishi
	4D55, 4D56	
GN-6	ED30, ED33, ED35, ED6	Nissan
GN-7	CD17	
GN-8	SD20, SD22, SD23, SD25, SD33, CD20, RD28, LD20, TD23	Mitsubishi
	4DQ, 4DQ50, 4D36, 4D55, 4D56, 4D68, 4M30, 4M40	
GN-9	YD22DD	Nissan
	4M41	Mitsubishi
GN-10	ZD30DD	Nissan
GN-11	YD25	Nissan
GD-1	1C, 2C, 2B, 3B, 2H, 2D, 2J, 1PZ, 1HZ, 1HD, 1KZ, 4B, 3C	Toyota
	CL10, CL30, CL50, CL70, DG, DL, DL50	Daihatsu
GM-4	DK10, DK20, DM100, DQ100, DS50, DS60, DS70, DS140	Hino
	EB100, EB200, EB300, EB400, EC100, EH100, EH300	
GM-5	RF, S2, R2, VS, XA, HA, ZB, WL	Mazda
GK-1		Komatsu
KI-2G		Kawasaki
KU-13	V2203, V1512	Kubota
KU-14	V1505, Z482, D662	

# Vacuum tester

## VP-3H Handy vacuum pump



The handy vacuum pump allows generating vacuum pressure by manual operation.

Since the handy vacuum pump allows pressure reduction as desired, it is indispensable for maintaining a device operated by vacuum pressure

Meter diameter	Max.scale	Min.scale	Depressurization capacity	Accessories	Total weight
φ 50mm	-100kPa (Approx. 75cmHg)	2kPa	Approx. -80kPa (Approx. 60cmHg)	Hose (500mm)	Approx. 800g

## VG-7B Vacuum tester (With amplitude adjust function)



This vacuum tester is used for identifying the cause of engine failure by measuring the negative pressure in the intake manifold of a gasoline engine car.

Being provided with the amplitude adjust function, the shaking width of the indicator can be adjusted according to need when the indicator shakes so sharply as to make reading difficult.

Meter diameter	Max.scale	Min.scale	Overall length	Accessories	Case	Total weight
φ 50mm	-100kPa (Approx. 75cmHg)	5kPa	1,130mm	Adapter No4 (PT1/8)	Metal case W 230 × D 120 × H 55mm	Approx. 1,000g

## VG-8 Vacuum tester (Precision class)



This vacuum tester is used for identifying the cause of engine failure by measuring the negative pressure in the intake manifold of a gasoline engine car.

The use of large-sized negative pressure gauge with smaller minimum scale enables minute adjustments

Meter diameter	Max.scale	Min.scale	Overall length	Accessories	Case	Total weight
φ 100mm	-100kPa (Approx. 75cmHg)	1kPa	1,670mm	T-type hose connector Straight-type hose connector Hose (100mm)	Metal case W 290 × D 165 × H 70mm	Approx. 1,550g

## VF-3B Vacuum fuel pump tester (With amplitude adjust function)



This vacuum fuel pump tester is provided with two functions of both a vacuum tester and a fuel pump tester.

Since the tester is provided with amplitude adjust function, the shaking width of the indicator can be adjusted when indicator shakes so sharply in vacuum testing. Measurement is allowed up to 50kPa (approx. 0.5kgf/cm<sup>2</sup>) for fuel pump testing.

Meter diameter	Max. scale	Min. scale	Overall length	Accessories	Case	Total weight
φ 60mm	Negative pressure: -100kPa (Approx. 75 cmHg)  Positive pressure: 50kPa (Approx. 0.5kgf/cm <sup>2</sup> )	5kPa	1,600mm	T-type rubber adapter Straight-type rubber adapter Straight-type hose connector Hose (100mm) Adapter No.0 (PT3/8) No.1 (PT1/8) No.2 (M12 × 1.5) No.5 (M8 × 1.25) No.7 (PT1/4)	Metal case  W 265 × D 135 × H 65mm	Approx. 1,600g

## VT-4B Four gauge vacuum tester (With amplitude adjust function)



The four gauge vacuum tester allows the measurement of up to four systems at the same time, and makes it easy to make measurement and balance adjustment of a multi-cylinder engine. Being provided with an adapter for a two-wheeled vehicle, this tester is indispensable for maintaining a two-wheeled vehicle. Since each tester can be used separately on its own, it can be used for extensive applications ranging from a single cylinder engine to four cylinder engine. The amplitude adjust function allows the adjustment of the shaking width of the indicator even when the indicator shakes so sharply.

Meter diameter	Max. scale	Min. scale	Overall length	Accessories	Case	Total weight
φ 60mm	Negative pressure: -100kPa (Approx. 75cmHg)	5kPa	1,090mm	Honda M5 × 0.8 Suzuki M5 × 0.75 Hose connector Hose (100mm) (4 for each)	Metal case W 335 × D 225 × H 55mm	Approx. 2,850g

☆ Optional adapter  
Suzuki, Yamaha M6 × 1.0

# Vacuum tester

## TB-3-1·TB-3-2

### Compound gauge



This compound gauge allows the continuous measurements of pressure ranging from positive pressure to negative pressure, thereby enabling the measurement of vacuum pressure and boost pressure of an engine with a supercharger.

Since the use of the provided pump bulb allows the manual application of pressure as desired, this gauge allows testing and making adjustment of a device operated at positive pressure with ease. Two types of gauges for the measurement of positive pressure are available in 100kPa (approx.1kgf/cm<sup>2</sup>) and 200kPa (approx.2kgf/cm<sup>2</sup>) types.

	Meter diameter	Max. scale	Min. scale	Pressurization capacity	Overall length	Accessories	Case	Total weight
TB-3-1	φ 75mm	Negative pressure: -100KPa (Approx. 75cmHg) Positive pressure: 100KPa (Approx. 1kgf/cm <sup>2</sup> )	5kPa	100kPa	2,170mm	T-type hose connector Straight-type rubber adapter	Metal case W 290 × D 165 × H 70mm	Approx. 1,600g
TB-3-2		Negative pressure: -100KPa (Approx. 75cmHg) Positive pressure: 200KPa (Approx. 2kgf/cm <sup>2</sup> )	10kPa	150kPa		Hose (100mm) Pump bulb		

※ The photo shows Model TB-3-1

## DV-10

### Vacuum tester for diesel engine



This vacuum tester is used for measuring the vacuum pressure of a diesel engine and identifying the cause of an engine failure.

The tester is connected between an engine and governor hose of an injection pump by means of the provided three-way joint.

Meter diameter	Max. scale	Min. scale	Accessories	Case	Total weight
φ 75mm	Negative pressure: -10KPa (Approx. 7.5cmHg)	0.2kPa	Hose 1,000mm Three-way joint	Metal case W 290 × D 165 × H 70mm	Approx. 1,450g

## Adapter for vacuum tester

No 0	No 1	No 2	No 3	No 4	No 5	No 7	No 8	No 9
PT3/8	PT1/8	M12×1.5	M10×1.25	PT1/8	M8×1.25	PT1/4	M6×1.0	M12×1.25

# Radiator cap tester

## RC-3B Radiator cap tester



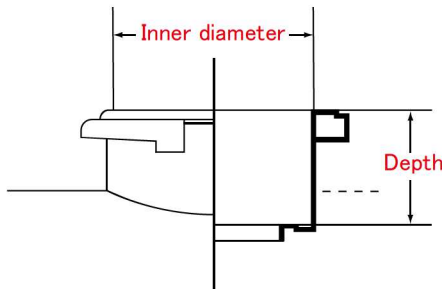
By applying pressure with a manual pump, this radiator cap tester allows an easy OK / NG assessment of a pressure valve of a radiator cap and checking for leakage of the cooling system.

The tester can also be used for identifying a leakage area by visual inspection.

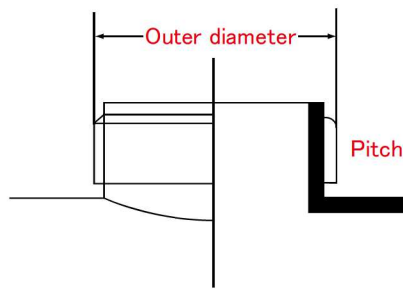
- Filler neck Type  
Lock type (Hook type)  
Inner diameter 41mm Depth 19.5mm 24.5mm
- Applicable vehicle type for reference  
Japanese medium and small-size truck  
Foreign car  
Former Japanese small-size car

Meter diameter	Max. scale	Min. scale	Pressurization capacity	Accessories	Total weight
φ 50mm	200kPa	10kPa	200kPa	Hose adapter Tubular adapter	Approx. 1,350g

## Adapter for radiator cap tester



For filler neck of current vehicle  
(hook-type)



For filler neck of current vehicle  
(screw-type)

### ■ Note ■

The information on the applicable vehicle types mentioned below are given for reference purposes. There may be cases that the specifications do not conform to those of applicable vehicles. So, please check the type and dimensions of the filler neck.

## RC-3BL

Adapter for large-size car



- Filler neck type  
Lock type (Hook type)  
Inner diameter 50mm Depth 27mm  
Inner diameter 53mm Depth 18mm
- Applicable vehicle type for reference  
Large-size car (Truck, bus, etc.)
- Total weight: Approx. 920g

## RC-3BS

Lock type (Hook type) adapter



- Filler neck type  
Lock type (Hook type)  
Inner diameter 31mm Depth 15.7mm
- Applicable vehicle type for reference  
Japanese small-size car
- Total weight: Approx. 480g

## RC-4BS

Lock type (Hook type) adapter



- Filler neck type  
Lock type (Hook type)  
Inner diameter 31mm Depth 9.5mm
- Applicable vehicle type for reference  
Japanese small-size car
- Total weight: Approx. 445g

# Radiator cap tester

## Screw-type adapter

### RC-3BTC

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 34mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Celica  
HiAce  
PRIUS
- Total weight: Approx. 390g



### RC-3BMZ

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 48.5mm, Pitch 2.5mm
- Applicable vehicle type for reference  
Axela  
Volvo
- Total weight: Approx. 290g



### RC-3BN

- Filler neck type Screw-type  
Flat packing seal type  
Outer diameter 48mm, Pitch 9 threads
- Applicable vehicle type for reference  
Mercedes-Benz  
Volkswagen  
Audi
- Total weight: Approx. 250g



### RC-3BP

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 56.6mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Volkswagen  
Audi
- Total weight: Approx. 440g



### RC-3BW

- Filler neck type Screw-type  
Flat packing seal type  
Outer diameter 51mm, Pitch 3.0mm
- Applicable vehicle type for reference  
BMW
- Total weight: Approx. 600g



### RC-3BW1

- Filler neck type Screw-type  
O-ring and flat packing seal type  
Outer diameter 52mm, Pitch 4.0mm
- Applicable vehicle type for reference  
BMW  
Bentley
- Total weight: Approx. 620g



### RC-3BW2

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 51.5mm, Pitch 3.0mm
- Applicable vehicle type for reference  
BMW
- Total weight: Approx. 330g



### RC-3BO

- Filler neck type Screw-type  
Flat packing seal type  
Outer diameter 51mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Opel  
Jaguar
- Total weight: Approx. 330g



### RC-3BC

- Filler neck type Screw-type  
Flat packing seal type  
Outer diameter 52mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Rover  
Ford
- Total weight: Approx. 250g



# Radiator cap tester

## Screw-type adapter

### RC-3BFG

- Filler neck type Screw-type  
Flat packing seal type  
Outer diameter 45mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Fiat, Lancia  
Alfa Romeo  
Peugeot, Renault  
Volvo, Saab
- Total weight: Approx. 420g



### RC-3BGM

- Filler neck type Screw-type  
Flat packing seal type  
Outer diameter 51.5mm, Pitch 2.5mm
- Applicable vehicle type for reference  
GM  
Toyota (Cavalier)
- Total weight: Approx. 240g



### RC-3BMB

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 62.5mm, Pitch 4.0mm
- Applicable vehicle type for reference  
Mercedes-Benz
- Total weight: Approx. 410g



### RC-3BJG

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 52mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Jaguar
- Total weight: Approx. 370g



### RC-3BRV

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 52mm, Pitch 4.0mm
- Applicable vehicle type for reference  
Rover
- Total weight: Approx. 330g



### RC-3BVW

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 63mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Volkswagen  
Audi
- Total weight: Approx. 560g



### RC-3BFT

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 45mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Fiat  
Alfa Romeo  
Lancia
- Total weight: Approx. 280g



### RC-3BPG

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 45mm, Pitch 3.0mm
- Applicable vehicle type for reference  
Peugeot
- Total weight: Approx. 270g



### RC-3BAR

- Filler neck type Screw-type  
O-ring seal type  
Outer diameter 51.5mm, Pitch 2.5mm
- Applicable vehicle type for reference  
Alfa Romeo
- Total weight: Approx. 330g



## PG-10D

Fuel pressure indicator (for Japanese car)

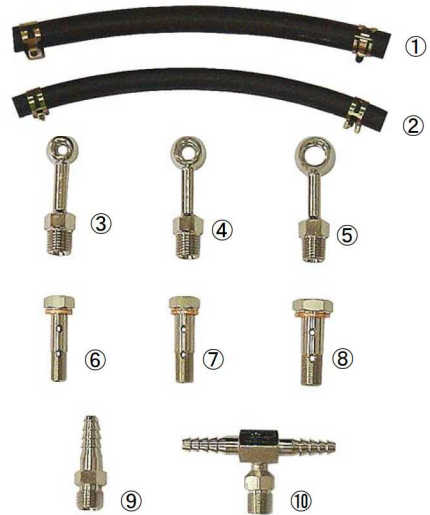


Meter diameter	Max. scale	Min. scale	Overall length	Case	Total weight
φ 75mm	1,000kPa (Approx. 10kgf/cm <sup>2</sup> )	10kPa	700mm	Metal case W 290 × D 165 × H 70mm	Approx. 1,900g

This is a tester for measuring the fuel pressure of computerized fuel injection equipment.

The tester is provided with adapters for Japanese cars.

※The tester also allows the measurement of fuel pressure of a foreign car (K Jetronic type) by the use of the adapter for PGS-10C.



Provided adapter

- ① Internal diameter 6mm Hose (15 x 6)
- ② Internal diameter 7mm Hose (12 X 7)
- ③ Round joint Internal diameter 8mm
- ④ Round joint Internal diameter 10mm
- ⑤ Round joint Internal diameter 12mm
- ⑥ Union bolt 8mm
- ⑦ Union bolt 10mm
- ⑧ Union bolt 12mm
- ⑨ Straight joint
- ⑩ T-type joint

※ A variety of optional adapters are also available

## PGS-10C

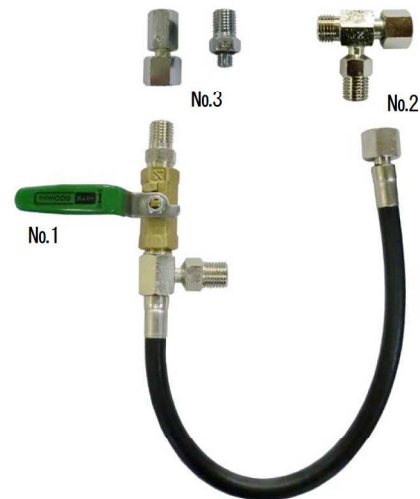
Fuel pressure indicator (for foreign car)



Meter diameter	Max. scale	Min. scale	Overall length	Case	Total weight
φ 100mm	1,000kPa (Approx. 10kgf/cm <sup>2</sup> )	10kPa	720mm	Metal case W 290 × D 165 × H 70mm	Approx. 2,000g

This fuel pressure indicator is provided with adapters for the measurement of the fuel pressure of foreign cars (K Jetronic type) and allows the testing of fuel injection equipment by measuring the fuel pressure on each part such as system pressure and control pressure.

※The tester also allows the measurement of the fuel pressure of a Japanese car by the use of the adapters for PG-10D.



Provided adapter

- No.1 Hose with two-way cock  
(M12 × 1.5)
- No.2 Benz  
(M14 × 1.5 T-type)
- No.3 Audi  
(M8 x 1.0, Set of male and female adapters)

※A variety of optional adapters are also available.



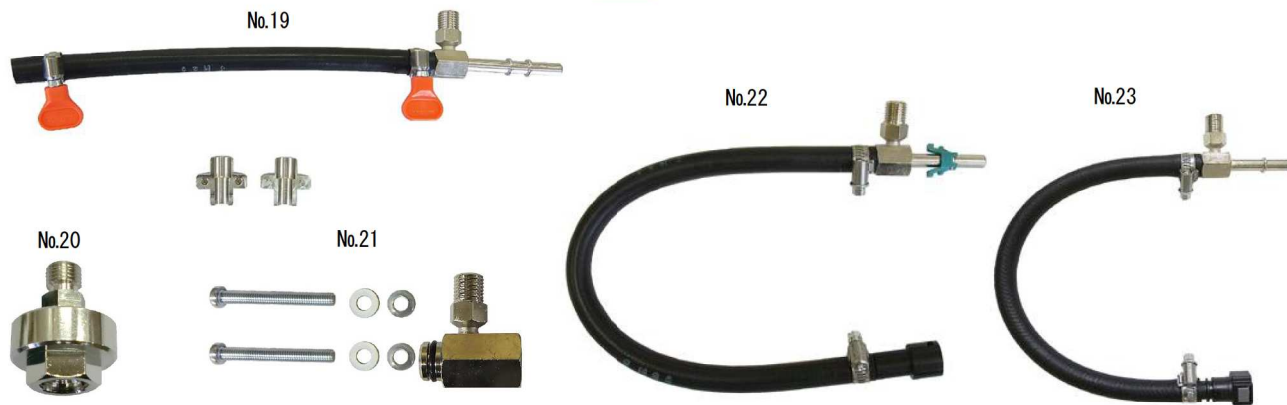
# Measuring instruments of fuel pressure

## Adapters for Fuel pressure indicator

(For PG-10D and PGS-10C)



Model	Applicable vehicle type	Thread size	Type	Remarks
No 4	Porsche	M6 × 1.0	Set of male and female adapters	No.1 Hose with two-way cock
No 5	Porsche	M14 × 1.5	T type	
No 6	Porsche	M16 × 1.5	T type	
No 7	Benz	M8 × 1.0	Straight	
No 8	Benz	M10 × 1.0	T type	
No 9	Benz	M10 × 1.25	T type	
No 10	Benz	M12 × 1.5	T type	
No 11	Volvo	M14 × 1.5	Straight	
No 12	Lincoln, Corvette	8V1	Straight (Core type)	TV-8 32 threads
No 13	Honda	M6 × 1.0	Straight	
No 14	Mazda	M14 × 1.5	Union and bolt set	
No 15	Pontiac	7/16-20UNF	T type	
No 16	BMW, Volvo Volkswagen	M12 × 1.5	Bolt alone	Round joint, 12mm required
No 17	Chevrolet, Cadillac	7/16-20UNF	Straight (Core type)	
No 18	Porsche	M8 × 1.0	T type	
No 19	Toyota		T type	Provided with special tool
No 20	Honda	M12 × 1.0		
No 21	Mitsubishi		T type	Bolt (2)
No 22	Honda (for 8mm pipes)		T type	Coupler type
No 23	Toyota (for 8mm pipes)		T type	Coupler type



### LP-1

### Fuel pressure indicator for LPG car



This is a tester for inspecting and servicing the regulator of LPG car. Inspection of decompression performance can be made by measuring the fuel pressure of the regulator by connecting it to the blind plug of the regulator.

Meter diameter	Max. scale	Min. scale	Overall length	Accessories	Total weight
φ 60mm	100kPa (Approx. 1kgf/cm <sup>2</sup> )	5kPa	1,620mm	Nipple PT1/8	Approx. 500g

※ A variety of optional adapters are available in various sizes.

# Measuring instruments of hydraulic pressure

## CT-2 Hydraulic gauge (for low pressure)



This hydraulic gauge can be used for the measurement of engine oil pressure of a motor and a low-pressure part of a service vehicle and construction machine.

Meter diameter	Max. scale	Min. scale	Overall length	Accessories	Total weight
φ 60mm	1,500kPa (Approx. 15kgf/cm <sup>2</sup> )	50kPa	1,470mm	Nipple (for low pressure) PT1/8 Nipple (for low pressure) PT1/4	Approx. 750g

- Optional adapter  
L-type joint (for low pressure)  
Nipple (for low pressure) PT3/8, PT1/2, PT5/8, PT3/4, and in other thread sizes

## CT-2H·3H·3.5H·5H·7H



※The photo shows Model CT-2H

## Hydraulic gauges (for high pressure)

This hydraulic gauge can be used for the measurement of a high-pressure part of a service vehicle, construction machine and various machine tools.

Five types of hydraulic gauges are available according to the pressure to be measured as detailed below

Model	Meter diameter	Max. scale	Min. scale	Overall length	Provided nipple (for high pressure)	Total weight
CT-2H	φ 75mm	25MPa (Approx. 250kgf/cm <sup>2</sup> )	0.5MPa	1,540mm	PT1/8, PT1/4, PT3/8	Approx. 910g
CT-3H	φ 100mm	30MPa (Approx. 300kgf/cm <sup>2</sup> )	0.5MPa	1,580mm	PT1/8, PT1/4, PT3/8	Approx. 1,030g
CT-3.5H	φ 100mm	35MPa (Approx. 350kgf/cm <sup>2</sup> )	1MPa	1,580mm	PT1/8, PT1/4, PT3/8	Approx. 1,030g
CT-5H	φ 100mm	50MPa (Approx. 500kgf/cm <sup>2</sup> )	1MPa	1,580mm	PT1/8, PT1/4, PT3/8	Approx. 1,045g
CT-7H	φ 100mm	70MPa (Approx. 700kgf/cm <sup>2</sup> )	2MPa	1,580mm	PT1/8, PT1/4, PT3/8	Approx. 1,610g

- Optional adapter  
L-type joint (for high pressure)  
Nipple (for high pressure) PT1/2, PT5/8, PT3/4, and in other thread sizes
- The max. scale other than the standard scale is available upon request.

## CT-3S Triple set of hydraulic gauges (for low and high pressure)



The triple set of hydraulic gauges including gauges allowing the measurement of low pressure through high pressure can be used for extensive applications.

Meter diameter	Max. scale	Min. scale	Overall length	Accessories	Case	Total weight
φ 60mm	2.5MPa (Approx. 25kgf/cm <sup>2</sup> )	0.1MPa	1,470mm	Nipple (for low pressure) PT1/8, PT1/4 (1 for each)	Metal case W 370 × D 270 × H 65mm	Approx. 4,600g
φ 75mm	7MPa (Approx. 70kgf/cm <sup>2</sup> )	0.2MPa	1,630mm	Nipple (for high pressure) PT1/8, PT1/4, PT3/8 (2 for each)		
φ 75mm	35MPa (Approx. 350kgf/cm <sup>2</sup> )	1MPa	1,580mm			

- A variety of optional adapters are also available.



### Note for selecting a hydraulic gauge

In selecting a hydraulic gauge, use caution so that pressure to be measured does not exceed the maximum scale of the meter. The use of the gauge for measuring exceeding the maximum scale may result in an accident causing damage to the gauge and rupture of the hose.

## Throttle device for hydraulic gauge (Buffer screw 1/4, 3/8, 1/2)



If the pulsation of pressure to be measured is extremely large, the indicator of the pressure gauge is extremely shaken, which may result in failure of the gauge. In this case, use the throttle device by connecting it to the hydraulic gauge so as to reduce the shaking of the indicator, which makes it possible to read indicator with ease and to prolong the life of the gauge.

## AT-3 Hydraulic gauge for automatic transmission



Meter diameter	Max. scale	Min. scale	Overall length	Case	Total weight
φ 75mm	3MPa (Approx. 30kgf/cm <sup>2</sup> )	0.1MPa	2,090mm	Metal case W 290 × D 165 × H 70mm	Approx. 2,600g

This hydraulic gauge is used to make measurement of various hydraulic systems of the automatic transmission system so as to locate faulty part such as a pressure leakage, defective part of a hydraulic piston and clogging of a screen.

The adapter and the tester are connected by means of a coupler with a valve. So, after adapters are fitted onto all the parts requiring measurement, the tester can be connected to the adapters one after another, thereby allowing quick measurement.

### Provided adapters

PT1/4	L-type, Long	(1)
PT1/4	L-type, Short	(1)
PT1/4	Straight	(2)
M12 × 1.5	Straight	(1)
PT1/8	L-type, Long	(3)
PT1/8	L-type, Short	(1)
PT1/8	Straight, Long	(1)
PT1/8	Straight, Short	(1)
5/16-24UNF	Straight	(1)

※A variety of optional adapters are also available.

## PS-150 Pressure gauge for power steering



Meter diameter	Max. scale	Min. scale	Overall length	Case	Total weight
φ 60mm	15MPa (Approx. 150kgf/cm <sup>2</sup> )	0.5MPa	1,660mm	Metal case W 370 × D 230 × H 80mm	Approx. 4,100g

This is a tester for the measurement of hydraulic pressure of the hydraulic power steering system. With various types of adapters provided, the tester can be used for a wide variety of vehicle types.

※Adapters for vehicles of Hino Motors are separately available.

Nissan				Toyota			Isuzu	
PN-1	PN-2	PN-3	PN-4	PT-1	PT-2	PI-1	PI-2	
PN-5	PN-6	PN-7		PT-3	PT-4	PI-3	PI-4	

## BC-4WD Hydraulic pressure tester for brake



This tester allows the simultaneous measurement of the hydraulic pressure of two systems of the hydraulic brake. The hose as long as 3 meter and the handle type air-bleeding valve requiring no tool allows quick and easy setup for measurement.

Meter diameter	Max. scale	Min. scale	Overall length	Accessories	Case	Total weight
φ 60mm	15MPa (Approx. 150kgf/cm <sup>2</sup> )	0.5MPa	3,170mm	Adapter M10 × 1.0 (2)	Metal case W 400 × D 355 × H 105mm	Approx. 5,350g

## BT-2·BT-3A·BT-3H·BT-4 Brake booster tester



This tester allows performance tests of various brake boosters in the vehicle-installed state.

### ■ Testing capacity (BT-4)

- ① Air tightness test when opened
- ② Oil tightness test
- ③ Operation start pressure test
- ④ Operating air tightness test at full load
- ⑤ Air tightness test of vacuum check valve
- ⑥ Air tightness test of power piston

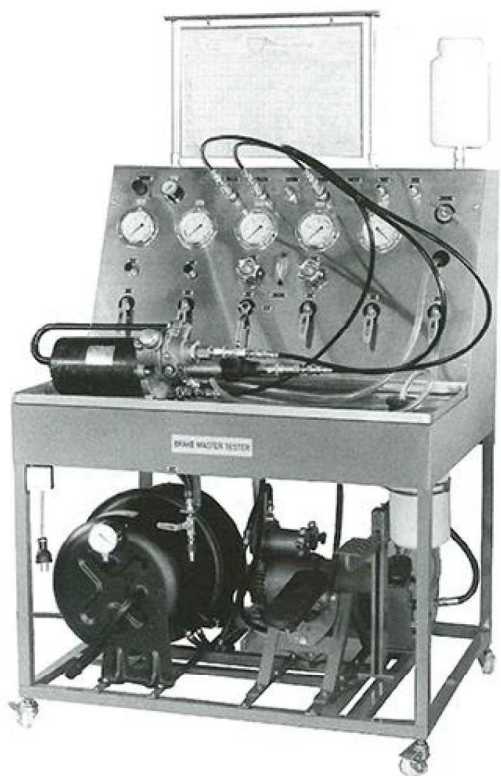
Tester	Meter diameter	Max. scale	Min. scale	Overall length
20MPa Pressure gauge	φ 75mm	20MPa (Approx. 200kgf/cm <sup>2</sup> )	1MPa	1,540mm
10MPa Pressure gauge	φ 75mm	10MPa (Approx. 100kgf/cm <sup>2</sup> )	0.5MPa	1,540mm
1MPa Pressure gauge	φ 60mm	1MPa (Approx. 10kgf/cm <sup>2</sup> )	0.02MPa	1,470mm
-100kPa Vacuum gauge	φ 75mm	Negative pressure -100kPa (Approx. 75cmHg)	5kPa	1,670mm

※The photo shows Model BT-4.

Model	BT- 2	BT- 3 A	BT- 3 H	BT- 4
Item included in the set	20MPa pressure gauge 10MPa pressure gauge	20MPa pressure gauge 10MPa pressure gauge 1MPa pressure gauge	20MPa pressure gauge 10MPa pressure gauge -100kPa vacuum gauge	20MPa pressure gauge 10MPa pressure gauge 1MPa pressure gauge -100kPa vacuum gauge
Accessories	Adapter for 20MPa (2) (M10 × 1.25) Nipple for 10MPa (1) (PT1/8)	Adapter for 20MPa (2) (M10 × 1.25) Nipple for 10MPa (1) (PT1/8) Nipple for 1MPa (1) (PT1/8)	Adapter for 20MPa (2) (M10 × 1.25) Nipple for 10MPa (1) (PT1/8) Nipple for vacuum gauge (1) (PT1/8) Rubber adapter for vacuum gauge (1)	Adapter for 20MPa (2) (M10 × 1.25) Nipple for 10MPa (1) (PT1/8) Nipple for 1MPa (1) (PT1/8) Nipple for vacuum gauge (1) (PT1/8) Rubber adapter for vacuum gauge (1)
Application	For hydraulic pressure measurement	For air master	For hydro master	For air master For hydro master
Total weight	Approx. 4,300g	Approx. 4,900g	Approx. 4,750g	Approx. 5,350g
Case	Metal case W 400 × D 355 × H 105mm			

The items to be included in the set can be changed at your request.

## BMT-70

Tester for brake master
【 production on order 】


This tester for the brake master allows continuous checking of the brake booster equipment including the air master, air booster, and hydro master installed on a large-size car, for each unit in actual running conditions.

It allows continuous operation check for each item. Each unit and tester main body are connected by a one-touch coupler to enable easy inspection work.

- Unit measurement item
  - ① Hydraulic pressure and air tightness
  - ② Air tightness test in non-operating and open state
  - ③ Operation start pressure test
  - ④ Full-load test
  - ⑤ Air tightness test at full load
  - ⑥ Residual pressure check valve test
  
- Outside dimensions
  - 860 (Overall width) ×
  - 700 (Depth) ×
  - 1,438 (Overall height) (mm)
  
- Weight
  - Approx. 95kg

## DI-50·DI-50B

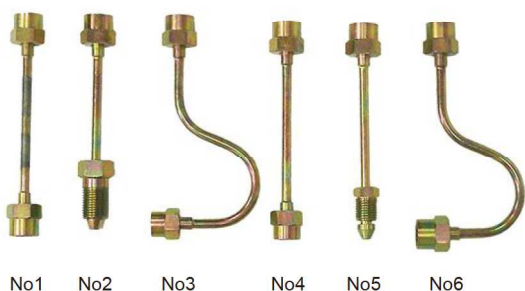
Nozzle tester


The nozzle tester is used for inspection and adjustment through the measurement of injection open valve pressure, oil-tightness test and visual inspection of injection angle and atomized state of an injection nozzle for a diesel engine.

Model DI-50B is provided with a valve on Model DI-50. The valve is closed to cut pressure transmission to the meter so as to protect the meter when the injection state is visually checked or the injection nozzle is removed.

Model	Meter diameter	Max. scale	Min. scale	Pressurization capacity	Accessories	Total weight
DI-50	φ 100mm	50MPa (Approx. 500kgf/cm <sup>2</sup> )	1MPa	50MPa	Adapter pipe No1 Adapter pipe No4	Approx. 6,000g
DI-50B						Approx. 6,500g

■ Table of adapter pipes for nozzle tester



No	Applicable manufacturer (for reference)	Thread size / Seal type	Remarks
No1	Isuzu	Female screw M14 × 1.5 / Male seal	Standard accessories
No2	Nissan Diesel	Male screw M16 × 1.5 / Male seal	Optional accessories
No3	Isuzu Toyota Daihatsu Mitsubishi	Female screw M12 × 1.5 / Male seal	Optional accessories
No4	Toyota Hino Mazda Mitsubishi Kubota	Female screw M12 × 1.5 / Male seal	Standard accessories
No5	Yanmar Komatsu	Male screw M14 × 1.5 / Male seal	Optional accessories
No6	Yanmar	Female screw M14 × 1.5 / Male seal	Optional accessories

※ The information on the applicable manufacturer included in the Table is given just for a reference purpose. Be sure to check the thread size and seal type for use.

## VR-1 Air valve lapper



The air valve lapper improves efficiency in lapping of valves by the use of air pressure of a compressor. Since required up-and-down motion is given by adjusting air pressure, this lapper can be used extensively for a smaller valve to a larger valve.

Operating air pressure	Outside dims.	Main body weight	Accessories	Total weight
0.4 ~ 0.8MPa (Approx. 4 ~ 8kgf/cm <sup>2</sup> )	225 × φ80mm	Approx. 1,200 g	Hose joint Suction rubber 45mm(Dia.) Suction rubber 35mm(Dia.) Suction rubber 30mm(Dia.) Suction rubber 20mm(Dia.)	Approx. 1,600g

☆ Optional accessories: Suction rubber 16mm (Dia.)

## Hand valve lapper



φ 45mm

φ 35mm

φ 30mm

φ 25mm

φ 20mm

φ 16mm

# SI unit (International unit) of pressure value

## ■ SI unit (International unit)

In line with the revision of the Measurement Law, the SI unit system was adopted as international unit in place of the gravitational unit system conventionally used so far.

As a result, “Pa (Pascal)” of the SI unit is used these days in place of “kgf/cm<sup>2</sup>(kg/cm<sup>2</sup>)” and “cmHg (mmHg)” which have been generally used for the unit of pressure.

As the unit for pressure gauges, MPa (Megapascal) or kPa (Kilopascal) is used.

$$1 \text{ MPa} = 1,000 \text{ kPa} = 1,000,000 \text{ Pa} \doteq 10.197 \text{ kgf/cm}^2$$

## ■ Conversion formula

From the conventional unit to SI unit

$$\boxed{\phantom{000000}} \text{ MPa} = \boxed{\phantom{000000}} \text{ kgf/cm}^2 \times 0.0980665$$

$$\boxed{\phantom{000000}} \text{ MPa} = \boxed{\phantom{000000}} \text{ cm Hg} \times 0.0013332$$

## ■ Conversion table

MPa	Megapascal	1	0.0981	0.00133	0.1	0.10132	0.06894
kgf/cm <sup>2</sup> (kg/cm <sup>2</sup> )	Weight kilogram per square centimeter	10.197	1	0.013595	1.0197	1.0332	0.0703
cm Hg	Centimeter of mercury	750.06	73.56	1	75.006	76	5.171
bar	Bar	10	0.9807	0.0133	1	1.0133	0.0689
atm	Atmospheric pressure	9.869	0.9678	0.01316	0.9869	1	0.068
lbw/in <sup>2</sup> (lb/in <sup>2</sup> ) (psi)	Weight pound per square inch	145.03	14.223	0.1933	14.503	14.7	1

※ Use this table as a guide for approximate conversion values.



## **TOYO TECH CO.,LTD.**

2-2-13, Hirano Minami, Hirano-ku, Osaka-shi 547-0031, Japan

TEL: +81-6-6709-7442 FAX: +81-6-6790-1501

**toyotech npa**

**search** 

<http://www.toyotech-ltd.com/>

Distributor

※The specifications included in this General Catalog are subject to change without notice.