United Delco

Delco Rochester
AQUANAUTICS MARINE

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—									
CARBURETOR MODEL		HV									
CARBURETOR NO.		7024088									

ADJUSTMENT SPECIFICATIONS

ADJUSTMENT BULLETIN NO.		9-MA-5									
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-1/16	1								
	SECONDARY	—	—								
FLOAT TOE	PRIMARY	—	—								
	SECONDARY	—	—								
FLOAT DROP	PRIMARY	1-13/16	2								
	SECONDARY	—	—								
FLOAT ALIGNMENT		—	—								
VACUUM ASSIST SPRING		—	—								
PUMP ROD LOCATION		—	—								
PUMP ROD		Index	4								
IDLE VENT		—	—								
INTERMEDIATE CHOKE ROD		—	—								
VACUUM BREAK		.190	8								
AUTOMATIC CHOKE		—	16								
CHOKE ROD		.190	11								
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		.325	13								
SECONDARY LOCKOUT		—	—								
SECONDARY CONTOUR		—	—								
THROTTLE RETURN CHECK		—	—								

TUNE UP SPECIFICATIONS

IDLE R.P.M.	500-N				
IDLE R.P.M. - AIR COND.	—				
FAST IDLE	.075				
DWELL	.034				
POINT GAP	—				
SPARK PLUG GAP	.035				
TIMING	4° BTDC @ Idle				

Delco Recuperator

AQUANAUTICS MARINE

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR	—
CARBURETOR MODEL	HV
CARBURETOR NO.	7028058

ADJUSTMENT SPECIFICATIONS

ADJUSTMENT	ADJUSTMENT NO.	6 MA-6 SPEC.	6 MA-6 PRO.NO.	SPEC.	PRO.NO.	SPEC.	PRO.NO.	SPEC.	PRO.NO.	SPEC.	PRO.NO.
FLOAT LEVEL	PRIMARY	1 1/16	1								
	SECONDARY	—	—								
FLOAT DROP	PRIMARY	—	—								
	SECONDARY	—	—								
	PRIMARY	1-13/16	7								
	SECONDARY	—	—								
FLOAT ALIGNMENT		—	—								
VACUUM ASSIST SPRING		—	—								
PRIMARY ROD LOCATION		—	—								
PRIMARY ROD		loops	6								
POWER VENT		—	—								
THERMO. EXPANDS CHOKE ROD		—	—								
VACUUM BREAK		150	9								
AUTOMATIC CHOKE		—	16								
CHOKE ROD		.190	11								
FAST IDLE		Turn screw in to contact low step of cam. Check two up after									
UNLOADER		.250	13								
SECONDARY LOCKOUT		—	—								
SECONDARY CONTOUR		—	—								
THROTTLE RETURN CHECK		—	—								

TUNE UP SPECIFICATIONS

SPARK PLUG	300-M
SPARK PLUG GAP	—
POINT DWELL	.029
POINT GAP	.024
CONDENSER CAP	—
IGNITION TIMING	.024
VALVE	4° BTDC @ idle

BULLETIN 9-MA-1
CHRIS CRAFT
DATE: AUGUST 1964
PAGE 1
REPLACES PAGE 1
DATED OCTOBER 1963
FILE AFTER MARINE
SPEC. & ADJ. DIVIDER

United Delco

Delco Rochester

CHRIS-CRAFT

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—		—		—					
CARBURETOR MODEL		4GC		4GC		2GC					
CARBURETOR NO.		7013071		7015090		7019082					
ADJUSTMENT SPECIFICATIONS											
ADJUSTMENT BULLETIN NO.		9-MA-4		9-MA-4		9-MA-3					
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-15/32	1-A	1-15/32	1-A	1-3/8	1				
	SECONDARY	1-3/8	1-A	1-1/2	1-A	—	—				
FLOAT TOE	PRIMARY	11/16	2	11/16	2	—	—				
	SECONDARY	3/8	2	5/8	2	—	—				
FLOAT DROP	PRIMARY	1-1/2	4	1-1/2	4	1-29/32	3				
	SECONDARY	1-5/16	4	1-5/16	4	—	—				
FLOAT ALIGNMENT		—	3	—	3	—	—				
VACUUM ASSIST SPRING		1-1/16	5	1-1/16	5	—	—				
PUMP ROD LOCATION		Outer	6	Outer	6	—	—				
PUMP ROD		1-1/32	6	1-1/32	6	29/32	4				
IDLE VENT		—	—	—	—	—	—				
INTERMEDIATE CHOKE ROD		Flush	8	Flush	8	—	—				
VACUUM BREAK		—	—	—	—	—	—				
AUTOMATIC CHOKE		3-N.L.	10	3-N.L.	10	1-N.L.	9				
CHOKE ROD		.050	12	.050	12	.090	11				
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		.120	14	.120	14	.350	12				
SECONDARY LOCKOUT		.015	15	.015	15	—	—				
SECONDARY CONTOUR		.120	16	.120	16	—	—				
THROTTLE RETURN CHECK		—	—	—	—	—	—				
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		500-N		500-N		500-N					
IDLE R.P.M. - AIR COND.		—		—		—					
FAST IDLE		—		—		—					
DWELL		Note #1		Note #1		Note #1					
POINT GAP		.017		.017		.017					
SPARK PLUG GAP		.028		.028		.028					
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		Mark on Rim of Flywheel @ 500 RPM		Mark on Rim of Flywheel @ 500 RPM		Mark on Rim of Flywheel @ 500 RPM					

Note #1 - with D-R Dist - 26° - 30°, with Auto-Lite Dist - 34° - 38°

CHRIS-CRAFT

ADJUSTMENT and TUNE UP SPECIFICATIONS

BULLETIN 9-MA-1
CRUSADER
DATE: AUGUST 1964
PAGE 1
REPLACES PAGE 1
DATED MARCH 1964

United Delco

Delco Rochester

CRUSADER

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—		—		—		—		
CARBURETOR MODEL		2G		2GC		4GC		4GC		4GC
CARBURETOR NO.		7015087 7015088 7015089 7015097 7015098 7023080		7020082		7020084		7020085		7023084 7023085 7023089
ADJUSTMENT SPECIFICATIONS										
ADJUSTMENT BULLETIN NO.		9-MA-3		9-MA-3		9-MA-4		9-MA-4		9-MA-4
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	5/8	2	5/8	2	1-5/16	1-A	1-15/32	1-A	1-3/8	1-A
	SECONDARY	—	—	—	—	1-3/8	1-A	1-3/8	1-A	1-11/32	1-A
FLOAT TOE	PRIMARY	—	—	—	—	1/2	2	11/16	2	11/16	2
	SECONDARY	—	—	—	—	3/8	2	3/8	2	9/16	2
FLOAT DROP	PRIMARY	1-29/32	3	1-29/32	3	1-11/32	4	1-1/2	4	1-3/8	4
	SECONDARY	—	—	—	—	1-1/8	4	1-1/8	4	1-3/8	4
FLOAT ALIGNMENT		—	—	—	—	—	3	—	3	—	3
VACUUM ASSIST SPRING		—	—	—	—	—	—	1-1/16	5	—	—
PUMP ROD LOCATION		—	—	—	—	Outer	6	Outer	6	Outer	6
PUMP ROD		1-5/8	4	1-3/32	4	1-1/32	6	1-1/32	6	1-1/32	6
IDLE VENT		—	—	—	—	—	—	—	—	—	—
INTERMEDIATE CHOKE ROD		—	—	Flush	6	Flush	8	Flush	8	Flush	8
VACUUM BREAK		—	—	—	—	—	—	—	—	—	—
AUTOMATIC CHOKE		—	—	Index	9	3-N.L.	10	3-N.L.	10	3-N.L.	10
CHOKE ROD		—	—	.090	11	.050	12	.050	12	.050	12
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		—	—	.350	13	.120	14	.120	14	.120	14
SECONDARY LOCKOUT		—	—	—	—	.015	15	.015	15	.015	15
SECONDARY CONTOUR		—	—	—	—	.120	16	.120	16	.120	16
THROTTLE RETURN CHECK		—	—	—	—	—	—	—	—	—	—
TUNE UP SPECIFICATIONS										
IDLE R.P.M.		550-N		550-N		550-N		550-N		550-N	
IDLE R.P.M. - AIR COND.		—		—		—		—		—	
FAST IDLE		800		800		800		800		800	
DWELL		28° - 32°		28° - 32°		28° - 32°		28° - 32°		28° - 32°	
POINT GAP		—		—		—		—		—	
SPARK PLUG GAP		.032		.032		.032		.032		.032	
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		Mark on Flywheel @ Idle		Mark on Flywheel @ Idle		Mark on Flywheel @ Idle		Mark on Flywheel @ Idle		Mark on Flywheel @ Idle	

Delco Rochester

CRUSADER

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—		—		—		—		
CARBURETOR MODEL		2G		2GC		2GC		2GC		
CARBURETOR NO.		7023188 7023186		7024185		7024188		7025082		
ADJUSTMENT SPECIFICATIONS										
ADJUSTMENT BULLETIN NO.		9-MA-3		9-MA-3		9-MA-3		9-MA-3		
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC. FIG.NO.
FLOAT LEVEL	PRIMARY	5/8	2	11/16	2	5/8	2	5/8	2	
	SECONDARY	—	—	—	—	—	—	—	—	
FLOAT TOE	PRIMARY	—	—	—	—	—	—	—	—	
	SECONDARY	—	—	—	—	—	—	—	—	
FLOAT DROP	PRIMARY	1-31/32	3	1-29/32	3	1-31/32	3	1-29/32	3	
	SECONDARY	—	—	—	—	—	—	—	—	
FLOAT ALIGNMENT		—	—	—	—	—	—	—	—	
VACUUM ASSIST SPRING		—	—	—	—	—	—	—	—	
PUMP ROD LOCATION		Outer	4	—	—	—	—	—	—	
PUMP ROD		1-5/8	4	1-1/8	4	1-11/32	4	1-5/32	4	
IDLE VENT		—	—	—	—	—	—	—	—	
INTERMEDIATE CHOKE ROD		—	—	—	—	Flush	6	—	—	
VACUUM BREAK		—	—	—	—	—	—	—	—	
AUTOMATIC CHOKE		—	—	Index	9	Index	9	Index	9	
CHOKE ROD		—	—	.035	11	.035	11	.040	11	
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM								
UNLOADER		—	—	.080	13	.375	13	.160	13	
SECONDARY LOCKOUT		—	—	—	—	—	—	—	—	
SECONDARY CONTOUR		—	—	—	—	—	—	—	—	
THROTTLE RETURN CHECK		—	—	—	—	—	—	—	—	
TUNE UP SPECIFICATIONS										
IDLE R.P.M.		550-N		550-N		550-N		550-N		
IDLE R.P.M. - AIR COND.		—		—		—		—		
FAST IDLE		800		—		800		—		
DWELL		28° - 32°		28° - 31°		28° - 32°		31° - 34°		
POINT GAP		—		—		—		.022		
SPARK PLUG GAP		.032		.032		.032				
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		Mark on Flywheel @ Idle		10°-BTDC @ 550 RPM		Mark on Flywheel @ Idle		8° - BTDC @ Idle		

PRINTED IN U.S.A.

United Delco

Delco Rochester

DAYTONA

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—									
CARBURETOR MODEL		4G		4G							
CARBURETOR NO.		7023088 7023181		7023187							
ADJUSTMENT SPECIFICATIONS											
ADJUSTMENT BULLETIN NO.		9-MA-4		9-MA-4							
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-3/8	1-A	1-17/32	1						
	SECONDARY	1-11/32	1-A	1-19/32	1						
FLOAT TOE	PRIMARY	11/16	2	—	—						
	SECONDARY	9/16	2	—	—						
FLOAT DROP	PRIMARY	1-3/8	4	2-1/4	4-A						
	SECONDARY	1-3/8	4	2-1/4	4-A						
FLOAT ALIGNMENT		—	3	—	3						
VACUUM ASSIST SPRING		—	—	—	—						
PUMP ROD LOCATION		Outer	6	Center	6						
PUMP ROD		1	6	1-1/16	6						
IDLE VENT		—	—	—	—						
INTERMEDIATE CHOKE ROD		—	—	—	—						
VACUUM BREAK		—	—	—	—						
AUTOMATIC CHOKE		—	—	—	—						
CHOKE ROD		—	—	—	—						
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		—	—	—	—						
SECONDARY LOCKOUT		—	—	—	—						
SECONDARY CONTOUR		—	—	—	—						
THROTTLE RETURN CHECK		—	—	—	—						
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		600-700-N		600-700-N							
IDLE R.P.M. - AIR COND.		—		—							
FAST IDLE		—		—							
DWELL		28° - 32°		28° - 32°							
POINT GAP		.019		.019							
SPARK PLUG GAP		.035		.035							
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		6° - BTDC @ Idle		6° - BTDC @ Idle							

CO, WD, 131, 132:16, 9X, 9FR, 9FD

DAYTONA

ADJUSTMENT and TUNE UP SPECIFICATIONS

CARBURETOR MODEL	4G	4G		
CARBURETOR NO.	17023094 17023187	17023187		

ADJUSTMENT SPECIFICATIONS

	5 - MA - T		7 - MA - T				
ADJUSTMENT	SPEC.	ENGINE	SPEC.	ENGINE	SPEC.	ENGINE	SPEC.	ENGINE
FLOAT LEVEL PRIMARY	1-7/8"	1-A	1-1/2 32	1				
FLOAT LEVEL SECONDARY	1-7/8"	1-A	1-1/2 32	1				
FLOAT DROP PRIMARY	1-3/4"	4	2	—				
FLOAT DROP SECONDARY	1-3/4"	4	2	—				
FLOAT ALIGNMENT	—	3	—	3				
VACUUM ASSIST SPRING	—	—	—	—				
PUMP ROD LOCATION	Outer	5	Center	8				
CHOKE ROD	1	5	1-1/16	6				
IDLE VENT	—	—	—	—				
INTERMEDIATE CHOKE ROD	—	—	—	—				
VACUUM BREAK	—	—	—	—				
AUTOMATIC CHOKE	—	—	—	—				
CHOKE ROD	—	—	—	—				
FAST IDLE	—	—	—	—				
UNLOADER	—	—	—	—				
SECONDARY LOCKOUT	—	—	—	—				
SECONDARY CONTOUR	—	—	—	—				
THROTTLE RETURN CHECK	—	—	—	—				

TUNE UP SPECIFICATIONS

IDLE R.P.M.	600-700-N	600-700-N
IDLE R.P.M. - AIR COND.	—	—
FAST IDLE	—	—
DWELL	28° - 32°	28° - 32°
POINT GAP	.019	.019
SPARK PLUG GAP	.035	.035
TIMING - Vacuum advance line must be disconnected and plugged	6° - BTDC @ idle	6° - BTDC @ idle

BULLETIN 9-MA-1
GRAY
DATE: MARCH 1964
PAGE 1
REPLACES PAGES 1&2
DATED OCTOBER 1963

United Delco

Delco Rochester

GRAY

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—		—		—		—		
CARBURETOR MODEL		4GC		4GC		2GC		2GC		2GC
CARBURETOR NO.		7020087 7024086		7020991		7020992		7023189		7024080
ADJUSTMENT SPECIFICATIONS										
ADJUSTMENT BULLETIN NO.		9-MA-4		9-MA-4		9-MA-3		9-MA-3		9-MA-3
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-3/8	1-A	1-3/8	1-A	5/8	2	5/8	2	5/8	2
	SECONDARY	1-11/32	1-A	1-11/32	1-A	—	—	—	—	—	—
FLOAT TOE	PRIMARY	11/16	2	11/16	2	—	—	—	—	—	—
	SECONDARY	9/16	2	9/16	2	—	—	—	—	—	—
FLOAT DROP	PRIMARY	1-3/8	4	1-3/8	4	1-29/32	3	1-31/32	3	1-31/32	3
	SECONDARY	1-3/8	4	1-3/8	4	—	—	—	—	—	—
FLOAT ALIGNMENT		—	3	—	3	—	—	—	—	—	—
VACUUM ASSIST SPRING		—	—	—	—	—	—	—	—	—	—
PUMP ROD LOCATION		Outer	6	Outer	6	—	—	—	—	—	—
PUMP ROD		1-1/32	6	1-1/32	6	1-11/32	4	1-11/32	4	1-11/32	4
IDLE VENT		—	—	—	—	—	—	—	—	—	—
INTERMEDIATE CHOKE ROD		Flush	8	Flush	8	—	—	—	—	—	—
VACUUM BREAK		—	—	—	—	—	—	—	—	—	—
AUTOMATIC CHOKE		Index	10	3-N.L.	10	Index	9	Index	9	Index	9
CHOKE ROD		.050	12	.050	12	.050	11	.035	11	.035	11
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		.120	14	.110	14	.160	13	.375	13	.375	13
SECONDARY LOCKOUT		.015	15	.015	15	—	—	—	—	—	—
SECONDARY CONTOUR		.110	16	.110	16	—	—	—	—	—	—
THROTTLE RETURN CHECK		—	—	—	—	—	—	—	—	—	—
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		500-N		650-N		500-N		500		500	
IDLE R.P.M. - AIR COND.		—		—		—		—		—	
FAST IDLE		—		—		—		—		—	
DWELL		30°		26°		30°		30°		30°	
POINT GAP		.016		.016		.016		.016		.016	
SPARK PLUG GAP		.025		.030		.025		.025		.025	
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		5° - BTDC @ Idle		15° - BTDC @ 500 RPM		5° - BTDC @ Idle		TDC @ 500		15° - BTDC @ Idle	

Delco Rochester

GRAY

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—		—							
CARBURETOR MODEL		2GC		4GC							
CARBURETOR NO.		7024081		7024182							
ADJUSTMENT SPECIFICATIONS											
ADJUSTMENT BULLETIN NO.		9-MA-3		9-MA-3							
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	5/8	2	1-3/8	1-A						
	SECONDARY	—	—	1-11/32	1-A						
FLOAT TOE	PRIMARY	—	—	11/16	2						
	SECONDARY	—	—	9/16	2						
FLOAT DROP	PRIMARY	1-31/32	3	1-3/8	4						
	SECONDARY	—	—	1-3/8	4						
FLOAT ALIGNMENT		—	—	—	3						
VACUUM ASSIST SPRING		—	—	—	—						
PUMP ROD LOCATION		—	—	Outer	6						
PUMP ROD		1-15/32	4	1-1/32	6						
IDLE VENT		—	—	—	—						
INTERMEDIATE CHOKE ROD		—	—	Flush	8						
VACUUM BREAK		—	—	—	—						
AUTOMATIC CHOKE		Index	9	3-N.L.	10						
CHOKE ROD		.035	11	—	—						
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM.									
UNLOADER		.375	13	.110	14						
SECONDARY LOCKOUT		—	—	.015	15						
SECONDARY CONTOUR		—	—	.110	16						
THROTTLE RETURN CHECK		—	—	—	—						
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		500-N		650-N							
IDLE R.P.M. - AIR COND.		—		—							
FAST IDLE		—		—							
DWELL		30°		26°							
POINT GAP		.016		.016							
SPARK PLUG GAP		.025		.030							
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		15° - BTDC @ Idle Except Model UHCF-238 Set at 5° @ Idle		15° - BTDC @ 500 RPM							

BULLETIN 9-MA-1
INBOARD MARINE
DATE: OCTOBER 1963
PAGE 1
FILE AFTER MARINE
SPEC. & ADJ. DIVIDER

United Delco

Delco Rochester

INBOARD MARINE

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—									
CARBURETOR MODEL		H									
CARBURETOR NO.		7023182									

ADJUSTMENT SPECIFICATIONS

ADJUSTMENT BULLETIN NO.		9-MA-5									
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-3/16	1								
	SECONDARY	–	–								
FLOAT TOE	PRIMARY	–	–								
	SECONDARY	–	–								
FLOAT DROP	PRIMARY	1-3/4	2								
	SECONDARY	–	–								
FLOAT ALIGNMENT		–	–								
VACUUM ASSIST SPRING		–	–								
PUMP ROD LOCATION		–	–								
PUMP ROD		Index	3								
IDLE VENT		–	–								
INTERMEDIATE CHOKE ROD		–	–								
VACUUM BREAK		–	–								
AUTOMATIC CHOKE		–	–								
CHOKE ROD		–	–								
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		–	–								
SECONDARY LOCKOUT		–	–								
SECONDARY CONTOUR		–	–								
THROTTLE RETURN CHECK		–	–								

TUNE UP SPECIFICATIONS

IDLE R.P.M.					
IDLE R.P.M. - AIR COND.					
FAST IDLE					
DWELL					
POINT GAP					
SPARK PLUG GAP					
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.					

CO, WD, 131, 132:16, 9X, 9FR, 9FD

BULLETIN 9-MA-1
KIEKHAEFER
DATE: SEPTEMBER 1964
PAGE 1
REPLACES PAGE 1
DATED MARCH 1964
FILE AFTER MARINE
SPEC. & ADJ. DIVIDER

United Delco

Delco Rochester

KIEKHAEFER

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—	—	—	—	
CARBURETOR MODEL		2GC	BC	4GC	4GC	4GC
CARBURETOR NO.		7020993	7020994 7020996 7024180 7024181	7020995	7023180	7023183

ADJUSTMENT SPECIFICATIONS

ADJUSTMENT BULLETIN NO.		9-MA-3		9-MA-2		9-MA-4		9-MA-4		9-MA-4	
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	5/8	2	1-9/32	1	1-3/8	1-A	1-1/2	1	1-3/8	1-A
	SECONDARY	—	—	—	→	1-11/32	1-A	1-9/16	1	1-11/32	1-A
FLOAT TOE	PRIMARY	—	—	—	—	11/16	2	—	—	11/16	2
	SECONDARY	—	—	—	—	9/16	2	—	—	9/16	2
FLOAT DROP	PRIMARY	1-29/32	3	1-3/4	2	1-3/8	4	2-1/4	4-A	1-3/8	4
	SECONDARY	—	—	—	—	1-3/8	4	2-1/4	4-A	1-3/8	4
FLOAT ALIGNMENT		—	—	—	—	—	3	—	3	—	3
VACUUM ASSIST SPRING		—	—	—	—	—	—	—	—	—	—
PUMP ROD LOCATION		—	—	—	—	Outer	6	Outer	6	Outer	6
PUMP ROD		1-5/32	4	—	—	1-1/32	6	1-3/32	6	1-1/16	6
IDLE VENT		—	—	—	—	—	—	—	—	—	—
INTERMEDIATE CHOKE ROD		—	—	—	—	Flush	8	Flush	8	Flush	8
VACUUM BREAK		—	—	—	—	—	—	—	—	—	—
AUTOMATIC CHOKE		Index	9	Index	4	3-N.L.	10	Index	10	Index	10
CHOKE ROD		—	—	—	—	—	—	—	—	—	—
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		.160	13	.230	6	.120	14	.230	14	.130	14
SECONDARY LOCKOUT		—	—	—	—	.015	15	.020	15	.015	15
SECONDARY CONTOUR		—	—	—	—	.110	16	.020	16	.030	16
THROTTLE RETURN CHECK		—	—	—	—	—	—	—	—	—	—

TUNE UP SPECIFICATIONS

IDLE R.P.M.	550-N	550-N	550-N	550-N	550-N
IDLE R.P.M. - AIR COND.	—	—	—	—	—
FAST IDLE	—	—	—	—	—
DWELL	31° - 34°	31° - 34°	28° - 32°	28° - 32°	28° - 32°
POINT GAP	.022	See Note #1	.016	.016	.016
SPARK PLUG GAP	.035	.035	.035	.035	.035
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.	8° - BTDC @ Idle	7020994-7020996 10°-BTDC @ Idle 7024180-7024181 6°-BTDC @ Idle	12° - BTDC @ Idle	12° - BTDC @ Idle	12° - BTDC @ Idle

#1 — 7020994 — 7020996 — .016 7024180 — 7024181 — 22°

Delco Moderator

KIEKHAEFER

ADJUSTMENT and TUNE UP SPECIFICATIONS

United Delco

Delco Rochester
OUTBOARD MARINE
ADJUSTMENT and TUNE UP SPECIFICATIONS

BULLETIN 9-MA-1
OUTBOARD
DATE: SEPTEMBER 1964
PAGE 1
REPLACES PAGE 1
DATED MARCH 1964
FILE AFTER MARINE
SPEC. & ADJ. DIVIDER

YEAR		—									
CARBURETOR MODEL		BC		BC							
CARBURETOR NO.		7024087		7024089							
ADJUSTMENT SPECIFICATIONS											
ADJUSTMENT BULLETIN NO.		9-MA-2		9-MA-2							
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-9/32	1	1-9/32	1						
	SECONDARY	—	—	—	—						
FLOAT TOE	PRIMARY	—	—	—	—						
	SECONDARY	—	—	—	—						
FLOAT DROP	PRIMARY	1-3/4	2	1-3/4	2						
	SECONDARY	—	—	—	—						
FLOAT ALIGNMENT		—	—	—	—						
VACUUM ASSIST SPRING		—	—	—	—						
PUMP ROD LOCATION		—	—	—	—						
PUMP ROD		—	—	—	—						
IDLE VENT		—	—	—	—						
INTERMEDIATE CHOKE ROD		—	—	—	—						
VACUUM BREAK		—	—	—	—						
AUTOMATIC CHOKE		Index	4	Index	4						
CHOKE ROD		—	—	—	—						
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		.230	—	.230	—						
SECONDARY LOCKOUT		—	—	—	—						
SECONDARY CONTOUR		—	—	—	—						
THROTTLE RETURN CHECK		—	—	—	—						
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		550-N		550-N							
IDLE R.P.M. - AIR COND.		—		—							
FAST IDLE		—		—							
DWELL		30°		31° - 34°							
POINT GAP		.016		.016							
SPARK PLUG GAP		.035		.035							
TIMING		5° BTDC @ Idle		5° - BTDC @ Idle							

Delco Recuperator

OUTBOARD MARINE

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR	—			
CARBURETOR MODEL	BC	BD		
CARBURETOR NO.	7024027	7024028		

ADJUSTMENT SPECIFICATIONS

ADJUSTMENT BULLETIN NO.		3-MA-2		5-MA-2					
ADJUSTMENT		SPEC.	PROCED.	SPEC.	PROCED.	SPEC.	PROCED.	SPEC.	PROCED.
FLOAT LEVEL	PRIMARY	1-9/32	1	1-9/32	1				
	SECONDARY	—	—	—	—				
FLOAT TOE	PRIMARY	—	—	—	—				
	SECONDARY	—	—	—	—				
FLOAT DROP	PRIMARY	1-3/4	2	1-3/4	2				
	SECONDARY	—	—	—	—				
FLOAT ALIGNMENT		—	—	—	—				
VACUUM ASSIST SPRING		—	—	—	—				
PUMP ROD LOCATION		—	—	—	—				
PUMP ROD		—	—	—	—				
IDLE VENT		—	—	—	—				
METERING RATE CHOKE ROD		—	—	—	—				
VACUUM BREAK		—	—	—	—				
AUTOMATIC CHOKE		Index	4	Index	4				
CHOKE ROD		—	—	—	—				
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for exact setting.							
UNLOADER		.230	—	.230	—				
SECONDARY LOCKOUT		—	—	—	—				
SECONDARY CONTOUR		—	—	—	—				
THROTTLE RETURN CHECK		—	—	—	—				

TUNE UP SPECIFICATIONS

IDLE R.P.M.	550-N	550-N			
IDLE R.P.M. - AIR COND.	—	—			
FAST IDLE	—	—			
DWELL	30°	31° - 34°			
POINT GAP	.015	.015			
SPARK PLUG GAP	.035	.035			
TIMING	B.T.D.C. Idle	5° - B.T.D.C. Idle			

BULLETIN 9-MA-1
OWENS
DATE: AUGUST 1964
PAGE 1
REPLACES PAGE 1
DATED OCTOBER 1963
FILE AFTER MARINE
SPEC. & ADJ. DIVIDER

United Delco

Delco Rochester

OWENS

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—									
CARBURETOR MODEL		4GC									
CARBURETOR NO.		7023184									
ADJUSTMENT SPECIFICATIONS											
ADJUSTMENT BULLETIN NO.		9-MA-4									
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-17/32	1								
	SECONDARY	1-19/32	1								
FLOAT TOE	PRIMARY	—	—								
	SECONDARY	—	—								
FLOAT DROP	PRIMARY	2-1/4	4-A								
	SECONDARY	2-1/4	4-A								
FLOAT ALIGNMENT		—	3								
VACUUM ASSIST SPRING		—	—								
PUMP ROD LOCATION		Outer	6								
PUMP ROD		1-3/32	6								
IDLE VENT		—	—								
INTERMEDIATE CHOKE ROD		Flush	8								
VACUUM BREAK		—	—								
AUTOMATIC CHOKE		Index	10								
CHOKE ROD		.055	12								
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		.230	14								
SECONDARY LOCKOUT		.020	15								
SECONDARY CONTOUR		.020	16								
THROTTLE RETURN CHECK		—	—								
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		650-700-N									
IDLE R.P.M. - AIR COND.		—									
FAST IDLE		1200									
DWELL		31° - 35°									
POINT GAP		.020									
SPARK PLUG GAP		.035									
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		Red Mark on Flywheel @ TDC @ 600 RPM									

Delco Remy

OWENS

ADJUSTMENT and TUNE UP SPECIFICATIONS

ADJUSTMENT SPECIFICATIONS

United Delco

Delco Rochester

PALMER

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—		—		—		—		
CARBURETOR MODEL		4G		4G		2G		4G		
CARBURETOR NO.		7015091		7019084		7020088		7024084		
ADJUSTMENT SPECIFICATIONS										
ADJUSTMENT BULLETIN NO.		9-MA-4		9-MA-4		9-MA-3		9-MA-4		
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-15/32	1-A	1-13/32	1-A	5/8	2	1-3/8	1-A		
	SECONDARY	1-1/2	1-A	1-15/32	1-A	—	—	1-3/8	1-A		
FLOAT TOE	PRIMARY	11/16	2	5/8	2	—	—	11/16	2		
	SECONDARY	3/8	2	9/16	2	—	—	11/16	2		
FLOAT DROP	PRIMARY	1-1/2	4	1-1/2	4	1-29/32	3	1-3/8	4		
	SECONDARY	1-5/16	4	1-5/16	4	—	—	1-3/8	4		
FLOAT ALIGNMENT		—	3	—	3	—	—	—	3		
VACUUM ASSIST SPRING		1-1/16	5	29/32	5	—	—	—	—		
PUMP ROD LOCATION		Center	6	Center	6	—	—	Outer	6		
PUMP ROD		1-1/32	6	1-1/16	6	1-11/32	4	1-1/32	6		
IDLE VENT		—	—	—	—	—	—	—	—		
INTERMEDIATE CHOKE ROD		—	—	—	—	—	—	—	—		
VACUUM BREAK		—	—	—	—	—	—	—	—		
AUTOMATIC CHOKE		—	—	—	—	—	—	—	—		
CHOKE ROD		—	—	—	—	—	—	—	—		
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		—	—	—	—	—	—	—	—		
SECONDARY LOCKOUT		—	—	—	—	—	—	—	—		
SECONDARY CONTOUR		—	—	—	—	—	—	—	—		
THROTTLE RETURN CHECK		—	—	—	—	—	—	—	—		
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		600-N		600-N		600-N		600-N			
IDLE R.P.M. - AIR COND.		—		—		—					
FAST IDLE		—		—		—		—			
DWELL		27° - 30°		27° - 30°		30°		30°			
POINT GAP		.020		.020		—		—			
SPARK PLUG GAP		.028		.028		.033		.033			
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		10° @ 550 RPM		10° @ 550 RPM		5° - BTDC @ Idle		5° - BTDC @ Idle			

CO, WD, 131, 132:16, 9X, 9FR, 9FD

Delco Remy

Delco Zoomster

PALMER

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR						
CARBURETOR MODEL						
CARBURETOR NO.						

ADJUSTMENT SPECIFICATIONS

ADJUSTMENT								
ADJUSTMENT BULLETIN NO.								
ADJUSTMENT		SPEC.	INSUL.	SPEC.	INSUL.	SPEC.	PUMP	SPEC.
FLOAT LEVEL	PRIMARY							
	SECONDARY							
PULL OFF	PRIMARY							
	SECONDARY							
UNLOAD	PRIMARY							
	SECONDARY							
FAST IDLE								
VACUUM ASSIST SPRING								
PULL OFF ROD LOCATION								
PUMP ROD								
AIR B VENT								
INTERMEDIATE CHOKE ROD								
VACUUM BREAK								
AUTOMATIC CHOKE								
CHOKE ROD								
FAST IDLE								
UNLOADER								
SECONDARY LOCKOUT								
SECONDARY CONTOUR								
THROTTLE RETURN CHECK								

TUNE UP SPECIFICATIONS

IDLE R.P.M.				
IDLE R.P.M. - AIR COND.				
FAST IDLE				
DWELL				
POINT GAP				
SPARK PLUG GAP				
TIMING - Vacuum advance line must be disconnected and plugged				

BULLETIN 9-MA-1
REVLEY
DATE: SEPTEMBER 1964
PAGE 1
FILE AFTER MARINE
SPEC. & ADJ. DIVIDER

United Delco

Delco Rochester
REVLEY CORP.

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—									
CARBURETOR MODEL		BC		4GC		4GC		4GC			
CARBURETOR NO.		7024083		7024182		7024187		7025085			
ADJUSTMENT SPECIFICATIONS											
ADJUSTMENT BULLETIN NO.		9-MA-2		9-MA-4		9-MA-4		9-MA-4			
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	1-9/32	1	1-3/8	1-A	1-3/8	1-A	1-3/8	1-A		
	SECONDARY	—	—	1-11/32	1-A	1-11/32	1-A	1-11/32	1-A		
FLOAT TOE	PRIMARY	—	—	11/16	2	11/16	2	11/16	2		
	SECONDARY	—	—	9/16	2	9/16	2	9/16	2		
FLOAT DROP	PRIMARY	1-3/4	2	1-3/8	4	1-3/8	4	1-3/8	4		
	SECONDARY	—	—	1-3/8	4	1-3/8	4	1-3/8	4		
FLOAT ALIGNMENT		—	—	—	3	—	3	—	3		
VACUUM ASSIST SPRING		—	—	—	—	—	—	—			
PUMP ROD LOCATION		—	—	Outer	6	Inner	—	Inner	—		
PUMP ROD		—	—	1-1/32	6	1-1/32	6	1-1/32	6		
IDLE VENT		—	—	—	—	—	—				
INTERMEDIATE CHOKE ROD		—	—	Flush	8	Flush	8	Flush	8		
VACUUM BREAK		—	—	—	—	—	—				
AUTOMATIC CHOKE		Index	4	3-N.L.	10	Index	10	Index	10		
CHOKE ROD		.045	5	—	—	.050	12	.050	12		
FAST IDLE		—	—	—	—	—	—	—	—	—	—
UNLOADER		.230	6	.110	14	.120	14	.120	14		
SECONDARY LOCKOUT		—	—	.015	15	.015	15	.015	15		
SECONDARY CONTOUR		—	—	.110	16	.030	16	.030	16		
THROTTLE RETURN CHECK		—	—	—	—	—	—	—	—		
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		600-N		650-N		500-N		500-N			
IDLE R.P.M. - AIR COND.		—		—		—		—			
FAST IDLE		—		—		—		—			
DWELL		28°-30°		26°		30°		30°			
POINT GAP		.015		.016		.016		.016			
SPARK PLUG GAP		.033		.030		.035		.035			
TIMING		5° BTDC @ Idle		15° - BTDC @ 500 RPM		2-1/2° BTDC @ Idle		2-1/2° BTDC @ Idle			

Delco Rochester

REVLEY CORP.

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR	—			
CARBURETOR MODEL	8C	4GC	4SC	4GC
CARBURETOR NO.	7024169	7024182	7024182	7024209

ADJUSTMENT SPECIFICATIONS

ADJUSTMENT BULLETIN NO.		9-MA-2		9-MA-4		9-MA-4		9-MA-4	
ADJUSTMENT		SPEC.	PROCED.	SPEC.	PROCED.	SPEC.	PROCED.	SPEC.	PROCED.
FLOAT LEVEL	PRIMARY	1-9/32	1	1-3/8	1-A	1-3/8	1-A	1-3/8	1-A
	SECONDARY	—	—	1-11/32	1-A	1-11/32	1-A	1-11/32	1-A
FLOAT DROP	PRIMARY	—	—	13/16	2	11/16	2	31/32	2
	SECONDARY	—	—	9/16	2	3/16	2	9/16	2
	PRIMARY	1-3/4	3	1-3/8	4	1-3/8	4	1-3/8	4
	SECONDARY	—	—	1-3/8	4	1-3/8	4	1-3/8	4
PUMP ROD LOCATION		—	—	Outer	5	Inner	—	Inner	—
PUMP ROD		—	—	1-1/32	5	1-1/32	6	1-1/32	5
IDLE VENT		—	—	—	—	—	—		
INTERMEDIATE CHOKE ROD		—	—	Plain	8	Plain	8	Plain	8
VACUUM BREAK		—	—	—	—	—	—		
AUTOMATIC CHOKE		Index	2	3-NL	10	Index	10	Taper	10
CHOKE ROD		.048	8	—	—	.060	12	.060	10
FAST IDLE		—	—	—	—	—	—	—	
UNLOADER		.350	6	.115	14	.120	14	.120	14
SECONDARY LOCKOUT		—	—	.015	15	.015	15	.015	15
SECONDARY CONTOUR		—	—	.110	16	.050	16	.050	16
THROTTLE RETURN CHECK		—	—	—	—	—	—	—	—

TUNE UP SPECIFICATIONS

IDLE R.P.M.	600 N	650-N	700-S	700 N
IDLE R.P.M. - AIR COND.	—	—	—	—
FAST IDLE	—	—	—	—
DWELL	28°-30°	28°	28°	30
POINT GAP	.015	.016	.016	.016
SPARK PLUG GAP	.035	.030	.035	.035
TIMING	2° BTDC w/Idle @ 600 RPM	12° - BTDC @ 500 RPM	2-1/2° BTDC @ Idle	2-1/2° BTDC @ Idle

BULLETIN 9-MA-1
UNIVERSAL
DATE: OCTOBER 1963
PAGE 1
FILE AFTER MARINE
SPEC. & ADJ. DIVIDER

United Delco

Delco Rochester
UNIVERSAL MOTORS
ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR		—		—							
CARBURETOR MODEL		2GC		BC							
CARBURETOR NO.		7023081		7024083							
ADJUSTMENT SPECIFICATIONS											
ADJUSTMENT BULLETIN NO.		9-MA-3		9-MA-2							
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	11/16	2	1-9/32	1						
	SECONDARY	—	—	—	—						
FLOAT TOE	PRIMARY	—	—	—							
	SECONDARY	—	—	—	—						
FLOAT DROP	PRIMARY	1-29/32	3	1-3/4	2						
	SECONDARY	—	—	—	—						
FLOAT ALIGNMENT		—	—	—	—						
VACUUM ASSIST SPRING		—	—	—	—						
PUMP ROD LOCATION		—	—	—	—						
PUMP ROD		1-1/8	4	—	—						
IDLE VENT		—	—	—	—						
INTERMEDIATE CHOKE ROD		—	—	—	—						
VACUUM BREAK		—	—	—	—						
AUTOMATIC CHOKE		Index	9	Index	4						
CHOKE ROD		.035	11	.045	5						
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		.080	13	.230	6						
SECONDARY LOCKOUT		—	—	—	—						
SECONDARY CONTOUR		—	—	—	—						
THROTTLE RETURN CHECK		—	—	—	—						
TUNE UP SPECIFICATIONS											
IDLE R.P.M.		600-N		600-N							
IDLE R.P.M. - AIR COND.		—		—							
FAST IDLE		—		—							
DWELL		28° - 30°		28° - 30°							
POINT GAP		.015		.015							
SPARK PLUG GAP		.033		.033							
TIMING - Vacuum advance line MUST be disconnected and fitting plugged.		5° - BTDC @ Idle		5° - BTDC @ Idle							

CO, WD, 131, 132:16, 9X, 9FR, 9FD

Delco Roobester

UNIVERSAL MOTORS

ADJUSTMENT and TUNE UP SPECIFICATIONS

YEAR	—	—	—
CARBURETOR MODEL	2GC	BC	
CARBURETOR NO.	7029051	7029082	

ADJUSTMENT SPECIFICATIONS

ADJUSTMENT BULLETIN NO.		0-MA-3		3-MA-2							
ADJUSTMENT		SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.	SPEC.	FIG.NO.
FLOAT LEVEL	PRIMARY	11/16	2	1-9/32	1						
	SECONDARY	—	—	—	—						
FLOAT TOE	PRIMARY	—	—	—	—						
	SECONDARY	—	—	—	—						
FLOAT DROP	PRIMARY	1-29/32	5	1-3/4	2						
	SECONDARY	—	—	—	—						
FLOAT ALIGNMENT		—	—	—	—						
VACUUM ASSIST SPRING		—	—	—	—						
PUMP ROD LOCATION		—	—	—	—						
PUMP ROD		1-1/8	4	—	—						
IDLE VENT		—	—	—	—						
INTERMEDIATE CHOKE ROD		—	—	—	—						
VACUUM BREAK		—	—	—	—						
AUTOMATIC CHOKE		Index	9	Index	4						
CHOKE ROD		.093	11	.065	5						
FAST IDLE		Turn screw in to contact low step of cam. Check tune-up spec. for proper RPM									
UNLOADER		.080	13	.230	6						
SECONDARY LOCKOUT		—	—	—	—						
SECONDARY CONTROL		—	—	—	—						
THROTTLE RETURN CHECK		—	—	—	—						

TUNE UP SPECIFICATIONS

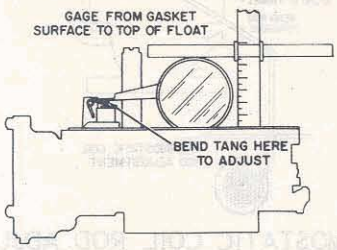
IDLE R.P.M.	600-N	600-N									
IDLE R.P.M. - AIR COND.	—	—									
FAST IDLE	—	—									
DWELL	28° - 32°	28° - 32°									
POINT GAP	.015	.015									
SPARK PLUG GAP	.032	.035									
TIMING - Vacuum advance line must be disconnected and fitting plugged.	5° - BTDC @ Idle	5° - BTDC @ Idle									

United Delco

Delco Rochester

BULLETIN 9-MA-2
DATE: OCTOBER 1963
PAGE 1
FILE AFTER MARINE
SPEC - ADJ DIVIDER

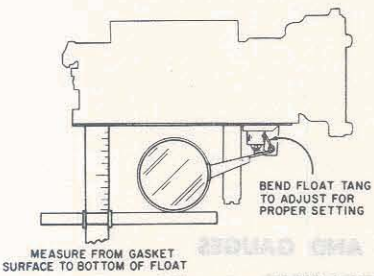
ADJUSTMENT PROCEDURES — "B" - "BC" - "BV"



FLOAT LEVEL ADJUSTMENT
FIG. 1

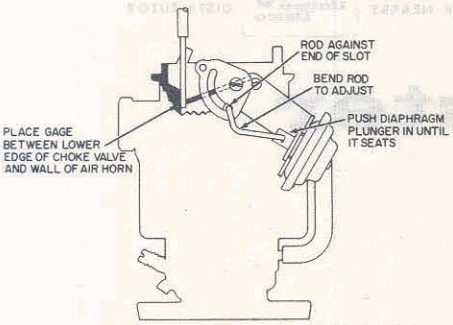
With the air horn inverted and the gasket in place, check height of each float as shown. Bend tang which contacts needle seat until each pontoon is set to specified dimension. Align floats to avoid interference in bowl.

NOTE: Model using spring loaded needle and seat assembly only. Place .030" shim between head of float needle pin and float arm. With float arm resting freely on shim, check float height with gauge. Bend float arms until each pontoon is set to specified dimension. Remove shim from between float needle and float arm after adjustment.



FLOAT DROP ADJUSTMENT
FIG. 2

With the air horn assembly held upright and floats suspended freely, carefully bend the float tang at the rear of the float arm so that the bottom of the float pontoon is set as specified.

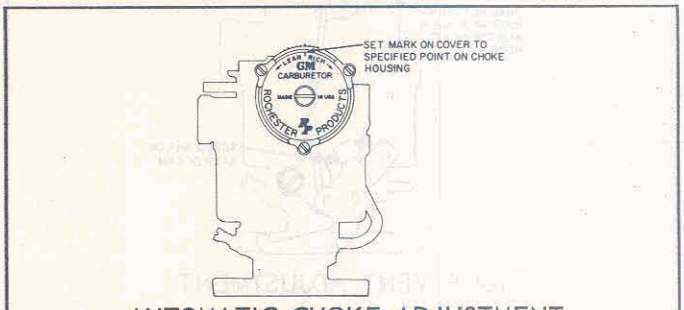


VACUUM BREAK ADJUSTMENT
FIG. 3

To insure correct initial choke valve opening, adjust vacuum break as follows.

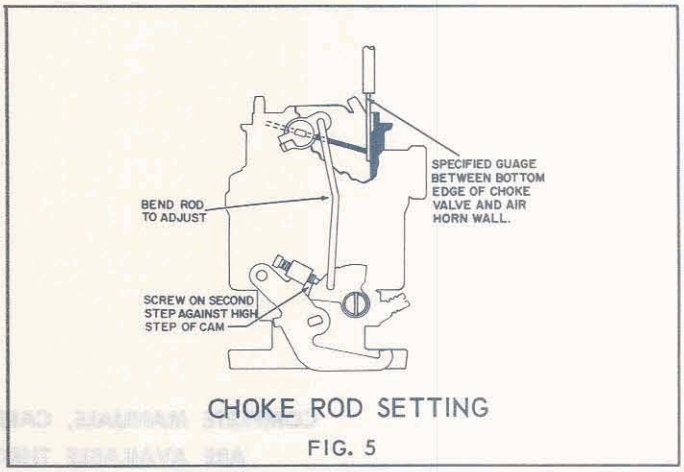
Push the vacuum break diaphragm plunger in until seated, making sure choke valve is closed so that the connecting rod is at end of the slot. In this position, adjust rod so that specified gauge will fit between lower edge of choke valve and inside of air horn casting.

To adjust, bend the connecting rod at point shown.



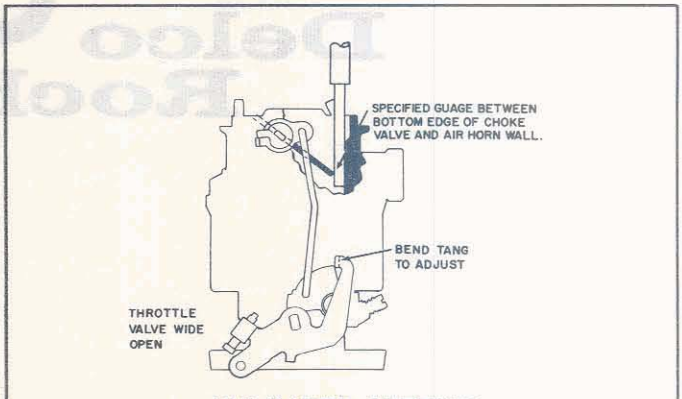
AUTOMATIC CHOKE ADJUSTMENT
FIG. 4

Loosen the three-retaining screws and rotate choke cover against coil tension until index mark on the cover is in the specified position with the index mark on the housing.



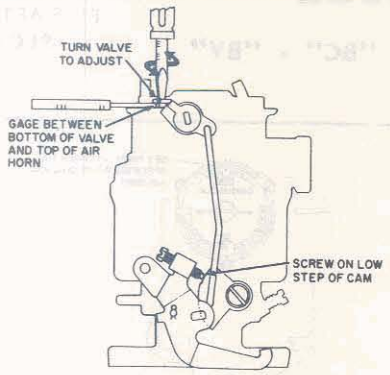
CHOKE ROD SETTING
FIG. 5

With the idle screw on the second step and against the high step of the fast idle cam, bend the choke rod to obtain specified dimension between the lower edge of the choke valve and the air horn wall.



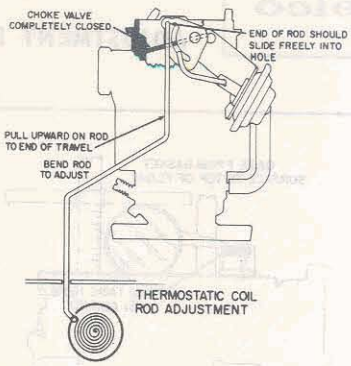
UNLOADER SETTING
FIG. 6

Bend the unloader tang on the throttle lever as necessary to obtain specified clearance between the lower edge of the choke valve and the air horn wall, with the throttle valves wide open.



IDLE VENT ADJUSTMENT
FIG. 7

With idle RPM set to specification, and screw on low step of cam, the idle vent valve should be open as specified. Adjust by turning valve on top of air horn as needed.



THERMOSTATIC COIL ROD ADJUSTMENT
FIG. 8

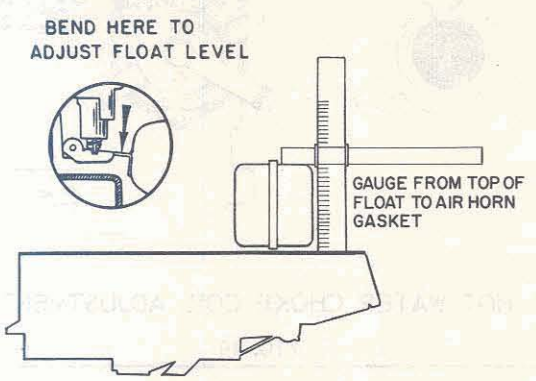
Disconnect thermostat rod from upper end of choke lever. Pull upward on rod to the end of its travel. Holding choke valve closed, the end of the rod should slide freely in hole in choke lever. Bend rod to adjust.

United Delco

Delco Rochester

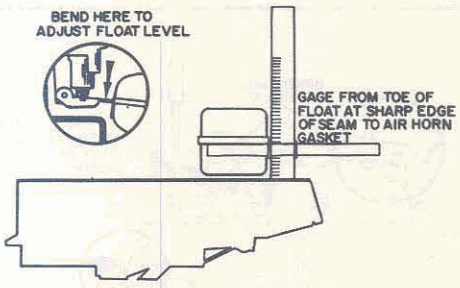
BULLETIN 9-MA-3
DATE: OCTOBER 1963
PAGE 1
FILE AFTER MARINE
SPEC - ADJ DIVIDER

ADJUSTMENT PROCEDURES —"2G", "2GC" AND "2GV"



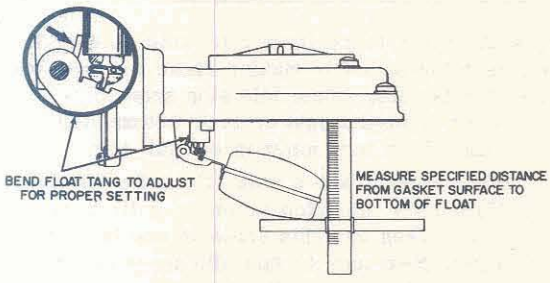
FLOAT LEVEL ADJUSTMENT
FIG. 1

With the air horn inverted and the gasket in place, measure the dimension from gasket surface to top of float. This dimension should be as specified in adjustment specification for model being serviced. To adjust, bend float arm, as shown in inset.



FLOAT LEVEL ADJUSTMENT
FIG. 2

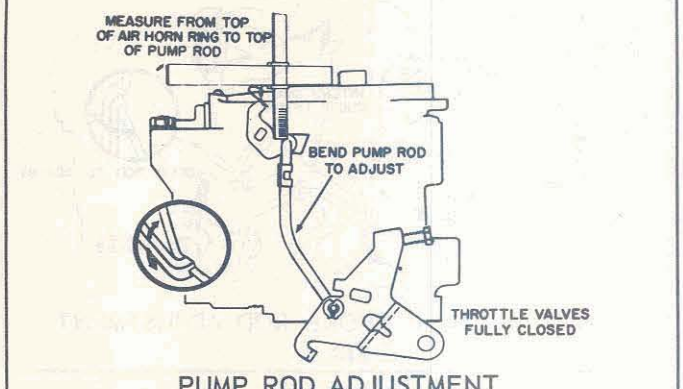
With air horn inverted and air horn gasket installed measure the distance from the air horn gasket to the lower edge (sharp edge) of the float seam at the outer end of the float pontoon. To adjust, bend the float arm at rear, as shown in inset.



FLOAT DROP ADJUSTMENT
FIG. 3

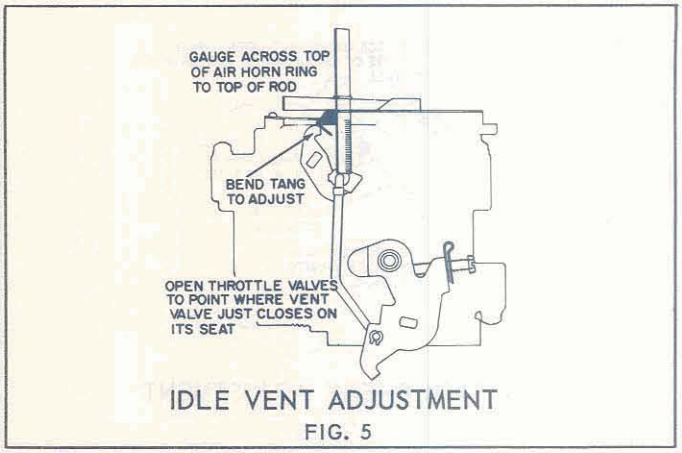
With the air horn assembly held upright and floats suspended freely, measure dimension from air horn gasket to bottom of float pontoon at toe, adjust to specified dimension by bending tang which contacts seat at rear of float arm.

CO, WD, 131, 132:16, 9X, 9FR, 9FD



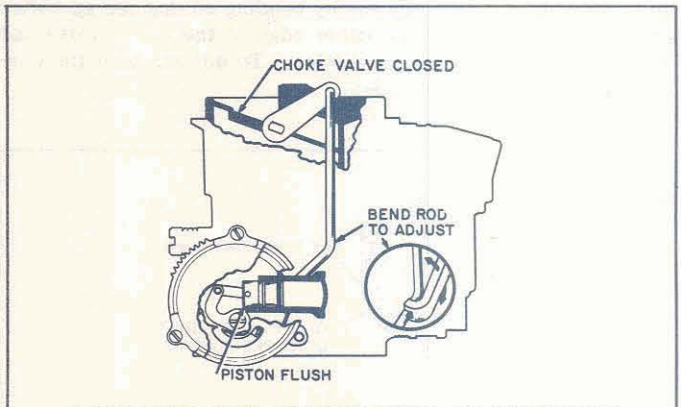
PUMP ROD ADJUSTMENT
FIG. 4

Back out idle stop screw and completely close throttle valves in bore. Place gauge on top of air horn ring. Bend the pump rod at lower angle to obtain specified dimension, to top of pump rod.



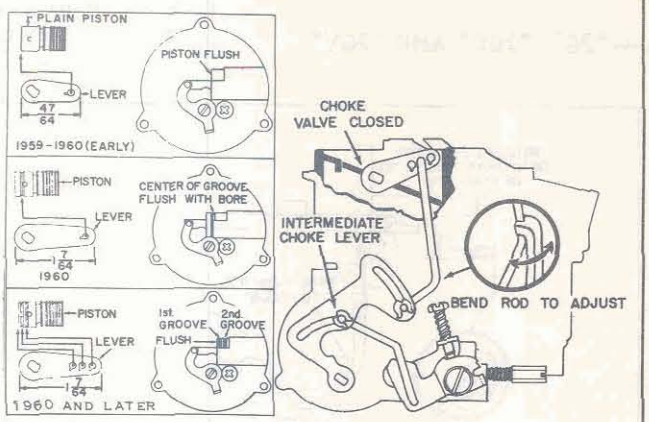
IDLE VENT ADJUSTMENT
FIG. 5

Open throttle until vent valve just closes. Place gauge on top of air horn ring. Dimension to top of pump rod should be as specified. Adjust by bending tang on pump lever.



INTERMEDIATE CHOKE ROD ADJUSTMENT
FIG. 6

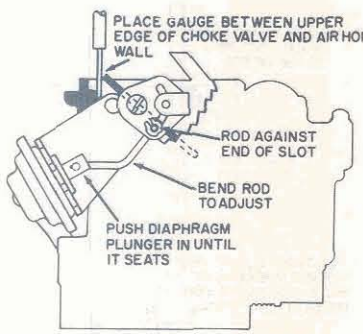
Remove the thermostat cover and coil assembly and inside baffle plate. Hold the choke valve completely closed and bend the intermediate choke rod as necessary so that the end of the choke piston is as specified, with the end of choke piston bore.



INTERMEDIATE CHOKE ROD ADJUSTMENT

FIG. 7

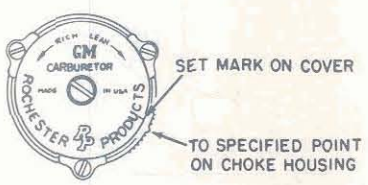
Remove the thermostatic cover and coil assembly and inside baffle plate. Open throttle valves and hold choke valve completely closed by pushing upward on intermediate choke lever. Adjust intermediate choke rod as necessary by bending so that choke piston is in the location shown above.



VACUUM BREAK ADJUSTMENT

FIG. 8

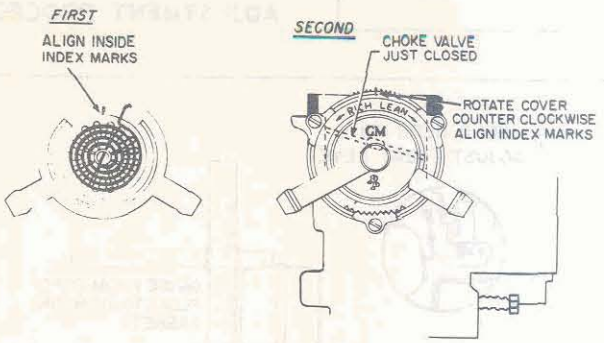
Push the vacuum break diaphragm plunger in until it is seated and make sure the choke valve is closed so the connecting rod is at the end of the slot in the choke shaft lever. In this position, adjust the rod by bending so that the specified gauge will fit between the upper edge of the choke valve and inside wall of the air horn casting. To adjust, bend the connecting rod at the point shown.



AUTO CHOKE ADJUSTMENT

FIG. 9

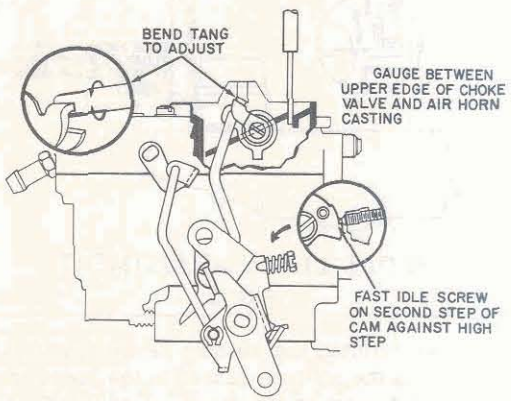
Loosen the three retaining screws and rotate the choke cover against coil tension until the index mark is in line with the specified point on the choke housing.



HOT WATER CHOKE COIL ADJUSTMENT

FIG. 10

There are two adjustments necessary to provide proper choke indexing. The inner choke cover containing the choke thermostatic coil must be indexed with the outer cover. This indexing can be accomplished by aligning the scribe mark on the inner cover with the index point on the outer cover, as shown. The complete choke cover assembly has a scribe mark on the outside which must be aligned with the proper index point on the choke housing.



CHOKE ROD ADJUSTMENT

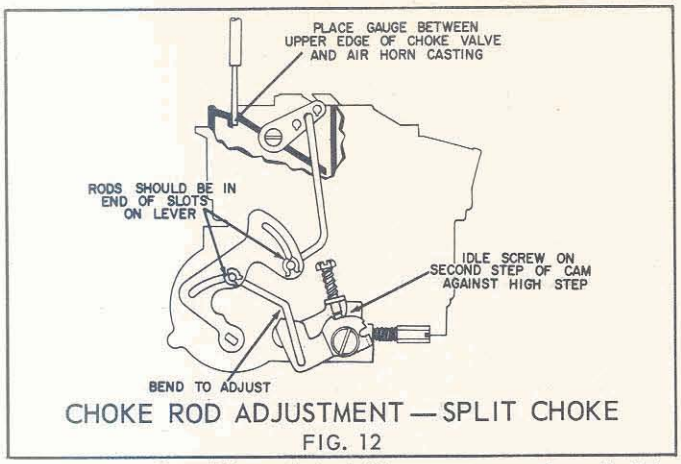
FIG. 11

It is important to position both slow idle and fast idle screws, as follows, before making choke rod adjustment.

Step 1 - Models using single idle stop screw only - Turn stop screw in until it just contacts bottom step of fast idle cam. Then turn screw in one full turn.

Models using both a slow idle and a fast idle screw - Turn slow idle stop screw in until it just contacts stop. Then turn this screw in one full turn from this point. Next turn the fast idle screw in until it touches bottom step of fast idle cam.

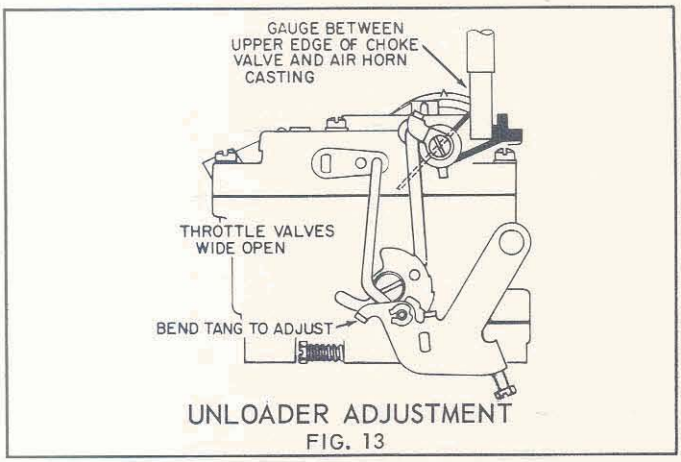
Step 2 - All models - Place idle screw on second step of fast idle cam against shoulder of high step. While holding screw in this position, check clearance between upper edge of choke valve and air horn wall, as shown. Adjust to specified dimension by bending tang on choke lever and collar assembly, as shown above.



CHOKE ROD ADJUSTMENT — SPLIT CHOKE
FIG. 12

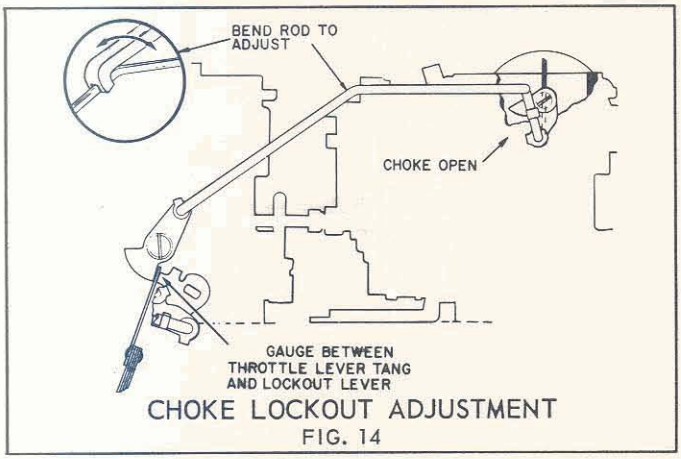
Position slow idle and fast idle screws as described in Step 1, Fig. 11, then place fast idle screw on the second step of the fast idle cam next to the high step as shown. Make sure intermediate choke rod and choke rod are in the ends of slots in the intermediate choke lever by pushing upward on lever.

Bend the choke rod until the proper gauge will just fit between the upper edge of the choke valve and air horn wall.



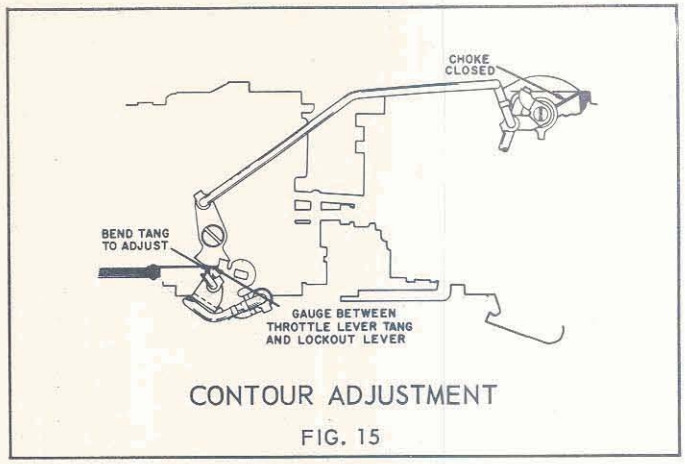
UNLOADER ADJUSTMENT
FIG. 13

With the throttle valves held wide open the choke valve should be open just enough to admit the specified gauge between the upper edge of the choke valve and inner air horn wall. Bend the tang on the throttle lever as shown to adjust.



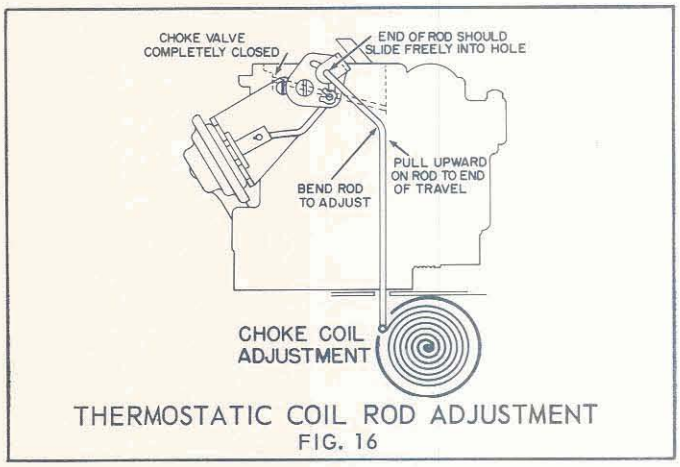
CHOKE LOCKOUT ADJUSTMENT
FIG. 14

To adjust, hold the choke valve in the wide open position. With the throttle valves slightly open on the carburetor to which the diaphragm is attached, there should be a clearance, as specified, between the lockout lever and the throttle lever as shown. Measure clearance with a feeler gauge and bend the lockout rod to adjust.



CONTOUR ADJUSTMENT
FIG. 15

To adjust, hold the throttle valves completely closed. With the choke valve on the center carburetor in the closed position and the choke lockout lever rod connected, bend the lockout tang on the throttle lever to obtain specified clearance between the lockout lever and tang on the throttle lever of the carburetor to which the diaphragm assembly is attached.



THERMOSTATIC COIL ROD ADJUSTMENT
FIG. 16

To adjust, disconnect the upper end of choke thermostatic coil rod from choke lever. Hold the choke valve completely closed and pull upward on the thermostatic coil rod to the limit of its travel. The end of the rod should slide freely into the hole in the choke shaft lever. To adjust, bend rod.

BULLETIN 9-MA-4
DATE: OCTOBER 1963
PAGE 1
FILE AFTER MARINE
SPEC - ADJ DIVIDER

United Delco

Delco Rochester

ADJUSTMENT PROCEDURES — "4G" AND "4GC"

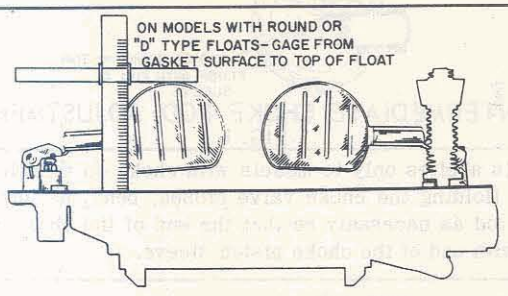
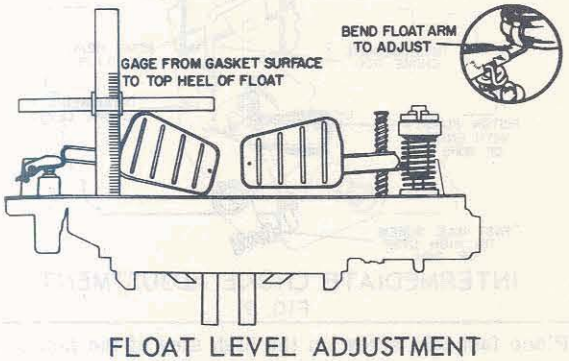


FIG. 1



FLOAT LEVEL ADJUSTMENT
FIG. 1A

Check for proper float level adjustment as follows: With air horn inverted and gasket in place, gauge from gasket surface to the top of each float next to seam. Adjust to specified dimension by bending float arms at junction point near needle and seat, as shown in inset.

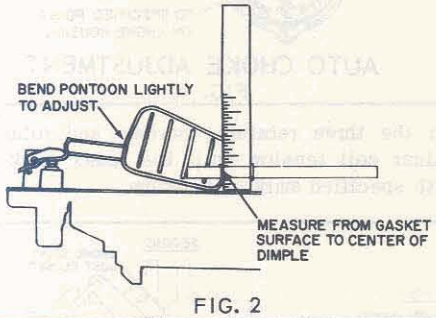
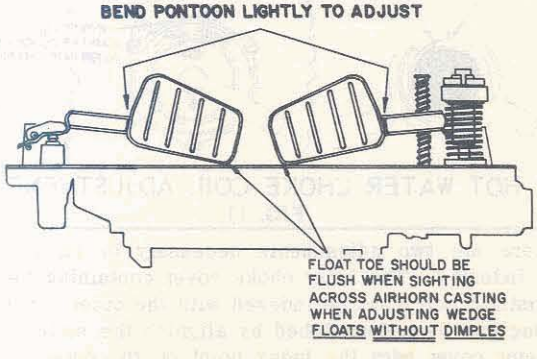
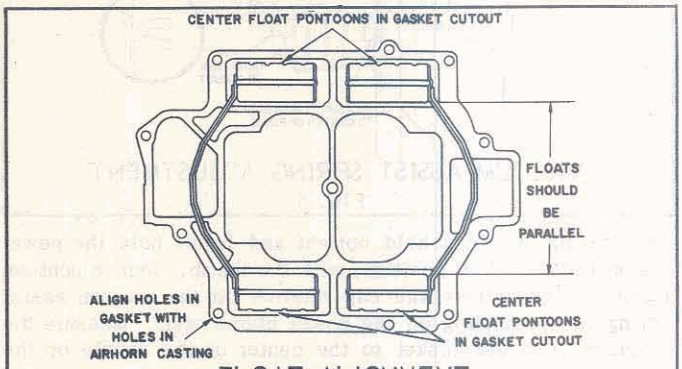


FIG. 2



FLOAT TOE ADJUSTMENT
FIG. 2A



FLOAT ALIGNMENT
FIG. 3

Align screw holes in air horn gasket with screw holes in air horn. Then make sure the floats are centered in the cut out section of the gasket and the sides of the float pontoons are parallel with the adjacent edges of the gasket. Bend float arms as necessary to adjust.

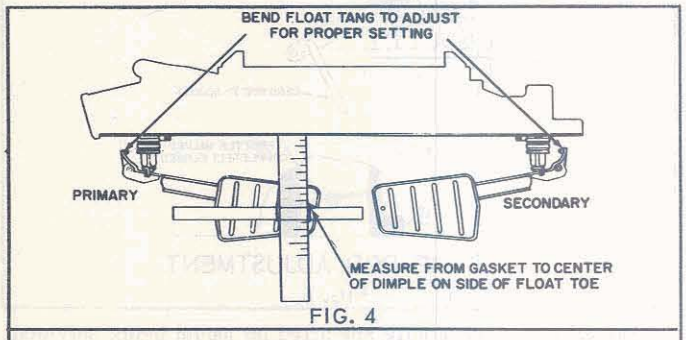
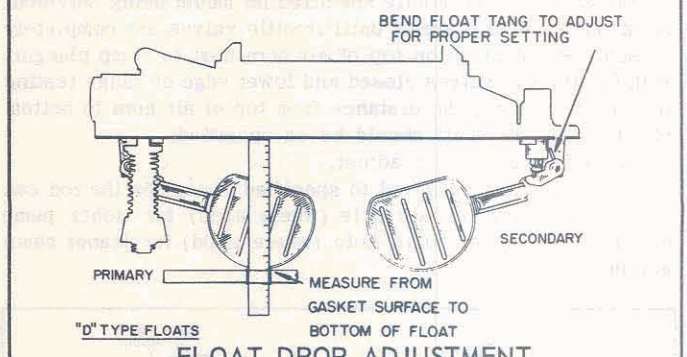


FIG. 4

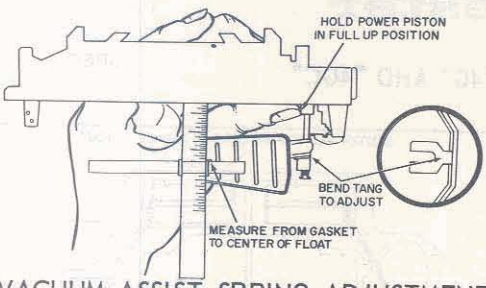


FLOAT DROP ADJUSTMENT
FIG. 4 A

With the air horn upright and level, gasket in place and the floats hanging freely, measure the distance on each float from the gasket surface to the center of the dimple, (wedge floats). Measure to lower end of toe for wedge floats without dimple. Measure to the lowest point on "D" or round pontoon floats. Adjust to specified dimension by bending tang which contacts seat or spring.

With air horn inverted and gasket in place, measure the distance from the gasket to the center of the dimple of each float at toe (small end). Adjust to specified dimension by bending the toe of each float up or down, as required.

Note: Wedge type floats which do not have dimples in sides of floats should be adjusted so lower tip of the float toe is flush with air horn casting when sighting across air horn casting, as shown in illustration - 2A.

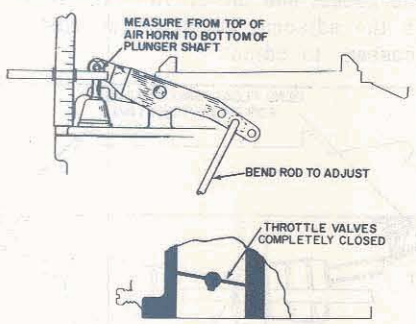


VACUUM ASSIST SPRING ADJUSTMENT
FIG. 5

With the air horn held upright and level, hold the power piston in the full up position, with the thumb. Jounce pontoon lightly to make sure the cup retainer on the vacuum assist spring is not binding on the power piston stem. Measure the distance from the gasket to the center of the dimple on the float pontoon at toe.

Note: Always hold power piston in "up" position.

To adjust, bend tang at center of float arms.

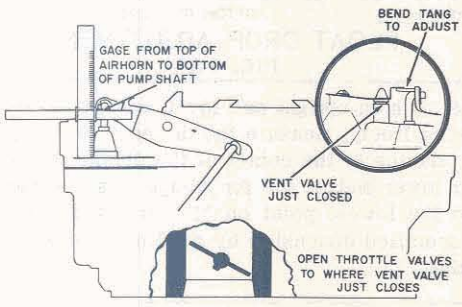


PUMP ROD ADJUSTMENT
FIG. 6

Install pump rod in hole specified for model being serviced. Back out slow idle screw until throttle valves are completely closed. Place gauge on top of air horn next to pump plunger. With the throttle valves closed and lower edge of gauge resting on top of air horn, the distance from top of air horn to bottom of pump plunger shaft should be as specified.

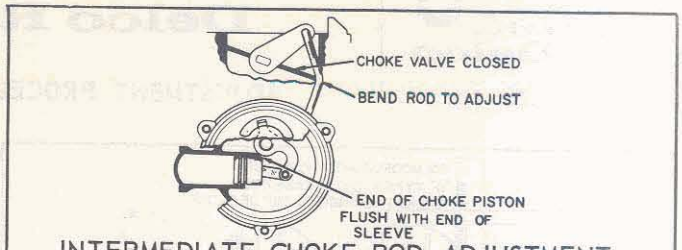
Bend the pump rod to adjust.

After adjusting pump rod to specified dimension the rod can be moved to the inboard hole (where used) for richer pump action or to the outboard hole (where used) for leaner pump action.



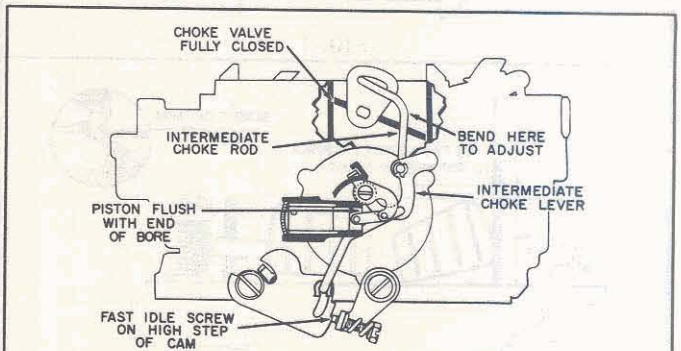
IDLE VENT ADJUSTMENT
FIG. 7

After making pump adjustment, adjust idle vent as follows: Open throttle valves enough to obtain the specified measurement from air horn to bottom of pump plunger shaft. At this point the idle vent should just close. To adjust, bend tang on pump lever as shown. On older models adjust by bending tang that contacts face of valve under pump lever.



INTERMEDIATE CHOKE ROD, ADJUSTMENT
FIG. 8

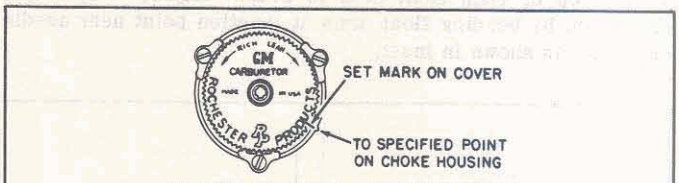
This applies only to models with choke on throttle body or bowl. Holding the choke valve closed, bend the intermediate choke rod as necessary so that the end of the choke piston is flush with end of the choke piston sleeve.



INTERMEDIATE CHOKE ADJUSTMENT
FIG. 9

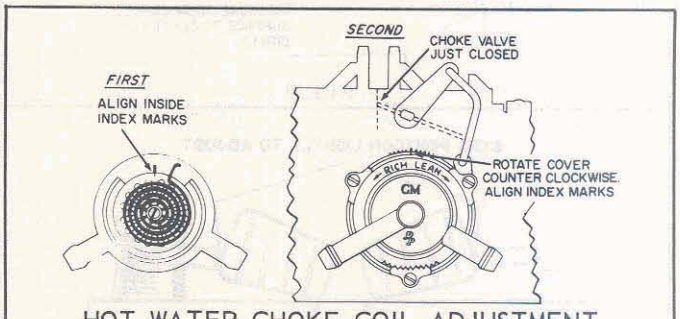
Place fast idle screw on the high step of the fast idle cam and raise the intermediate choke lever to its full up position. Be sure all lash is removed from rods in slots. The choke piston should be flush with the end of the choke piston bore.

Bend the intermediate choke rod to correctly position the choke piston.



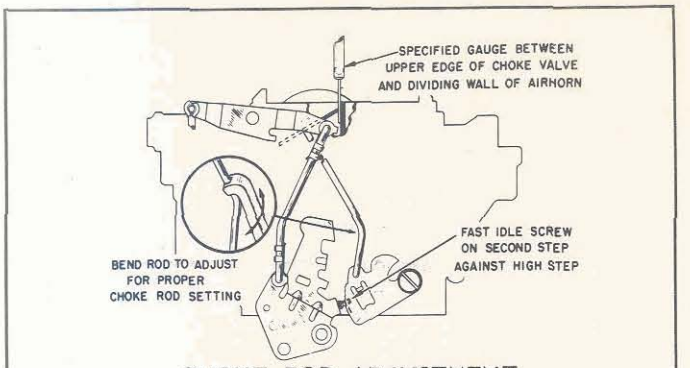
AUTO CHOKE ADJUSTMENT
FIG. 10

Loosen the three retaining screws and rotate the choke cover against coil tension until the index mark on cover is aligned with specified mark on housing.



HOT WATER CHOKE COIL ADJUSTMENT
FIG. 11

There are two adjustments necessary to provide proper choke indexing. The inner choke cover containing the choke thermostatic coil must be indexed with the outer cover. This indexing can be accomplished by aligning the scribe mark on the inner cover with the index point on the outer cover, as shown. The complete choke cover assembly has a scribe mark on the outside which must be aligned with the proper index point on the choke housing.



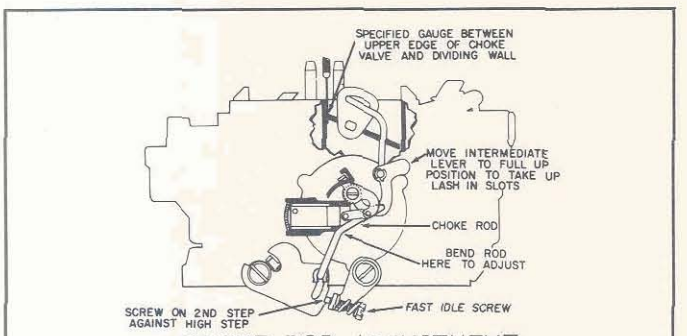
CHOKE ROD ADJUSTMENT
FIG. 12

It is important to position both slow idle and fast idle as follows before making choke rod adjustment:

Step 1 Models using single idle stop screw — Turn stop screw in until it contacts bottom step of fast idle cam. Then turn screw in one full turn.

Models using separate fast idle screw — Turn slow idle stop screw in until it touches stop, then turn one full turn. Then turn the fast idle screw in until it touches bottom step of fast idle cam.

Step 2 After positioning slow idle and fast idle screws as described above, position idle screw on second step of fast idle cam against the shoulder of the high step. Then check clearance between upper edge of choke valve and air horn wall. Bend choke rod, to adjust.

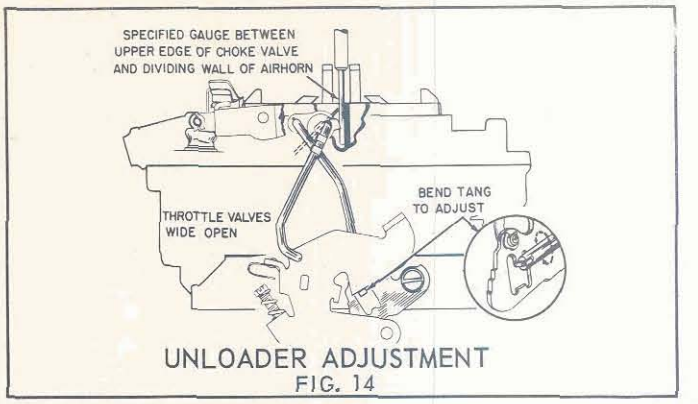


CHOKE ROD ADJUSTMENT
FIG. 13

Position slow idle and fast idle screws as described in Figure 2, then check the choke rod adjustment as follows:

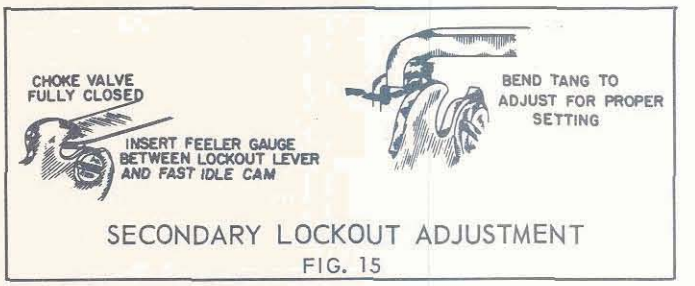
Position the fast idle screw on the second step of the fast idle cam and raise the intermediate choke lever to the full up position. Be sure the intermediate rod and the choke rod are at the upper limit of travel in the slots. Adjust the choke rod by bending to obtain the specified clearance between the choke valve and the dividing wall of the air horn.

To adjust, push the diaphragm plunger in until it seats. While holding the plunger seated, close the choke valve to the point where the vacuum diaphragm connecting rod is in the end of the plunger. At this point, the proper gauge should just fit between the upper edge of the choke valve and the dividing wall in the air horn.
Bend rod to adjust for proper clearance.



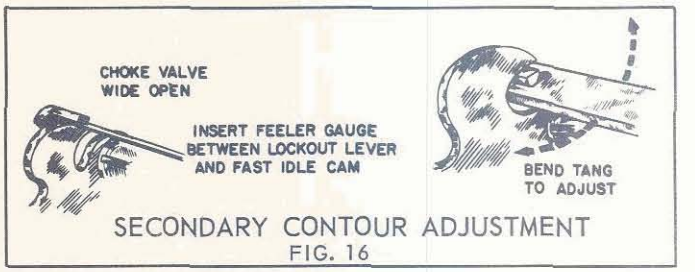
UNLOADER ADJUSTMENT
FIG. 14

Open primary throttle valve to wide open position. While holding lever in this position, check for specified clearance between upper edge of choke valve and air horn wall. Adjust by bending unloader tang on fast idle cam. On a few models, this adjustment is made by bending unloader tang on pump lever.



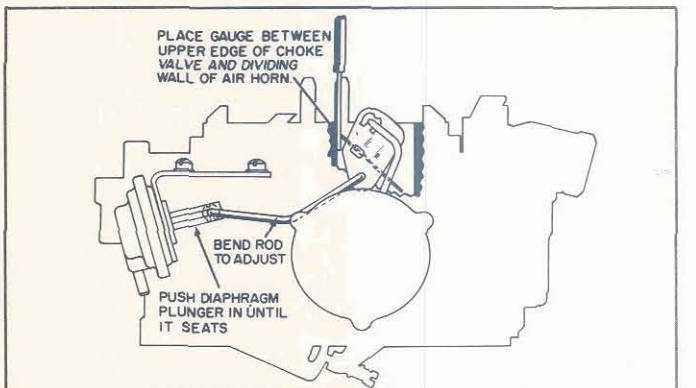
SECONDARY LOCKOUT ADJUSTMENT
FIG. 15

With the choke valve fully closed, bend the lockout lever as shown to obtain specified clearance between the cam and the widest surface of the lockout lever.



SECONDARY CONTOUR ADJUSTMENT
FIG. 16

With the choke valve wide open, bend the lockout lever to obtain specified clearance between the cam and the narrowest surface of the lockout lever at the point shown.



VACUUM BREAK ADJUSTMENT
FIG. 17

Idle adjustment — After engine has reached normal operating temperature adjust idle speed to correct RPM, with transmission in neutral or drive, as specified. Use accurate tachometer. Adjust idle mixture screws for best quality idle (highest RPM). A more stable idle will result if idle speed and mixture are rechecked after road test.

Fast idle adjustment — Adjust fast idle screw to give specified RPM with fast idle screw on the specified step of fast idle cam, engine at normal operating temperature, transmission in neutral.

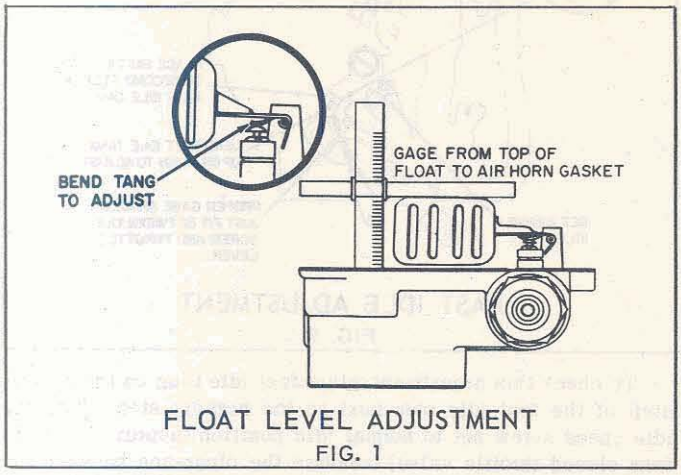
CO, WD, 131, 132:1.6, 9X, 9FR, 9FD

United Delco

Delco Rochester

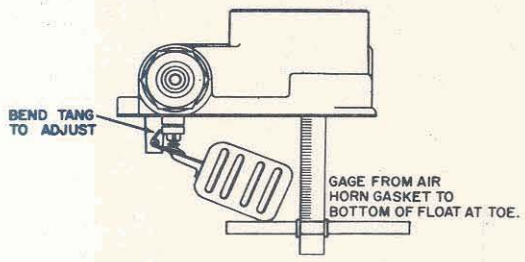
BULLETIN 9-MA-5
DATE: OCTOBER 1963
PAGE 1
FILE AFTER MARINE
SPEC - ADJ DIVIDER

ADJUSTMENT PROCEDURES — "H"



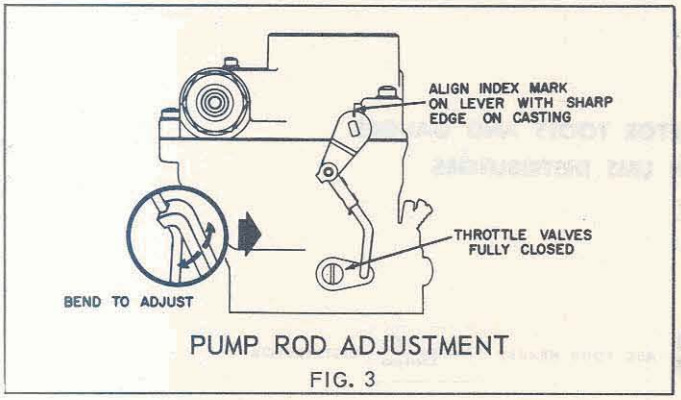
FLOAT LEVEL ADJUSTMENT
FIG. 1

With the air horn inverted and the gasket in place, check height of each float. Bend tang which contacts needle until each pontoon is set to specified dimension. Float pontoons should be parellel with air horn surface when set correctly. Align floats to avoid interference in bowl.



FLOAT DROP ADJUSTMENT
FIG. 2

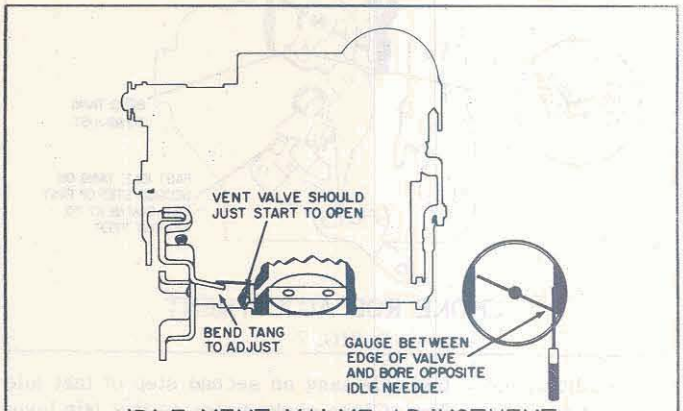
With the air horn assembly held upright and floats suspended freely, measure dimension from air horn gasket to bottom of float pontoon at toe, adjust to specified dimension by bending tang which contacts seat at rear of float arm.



PUMP ROD ADJUSTMENT
FIG. 3

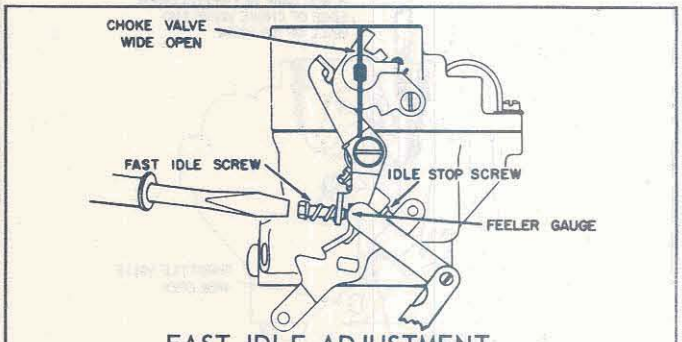
Back out idle stop screw until the throttle valves are completely closed in bore. Bend pump rod as shown until the index line on upper pump lever just aligns with sharp edge on air horn casting.

NOTE: On Powerglide applications using a two hole lower pump lever, setting should be made with pump rod placed in outer hole. After setting is made, pump rod should be moved to inner hole on lever for proper operation.



IDLE VENT VALVE ADJUSTMENT
FIG. 4

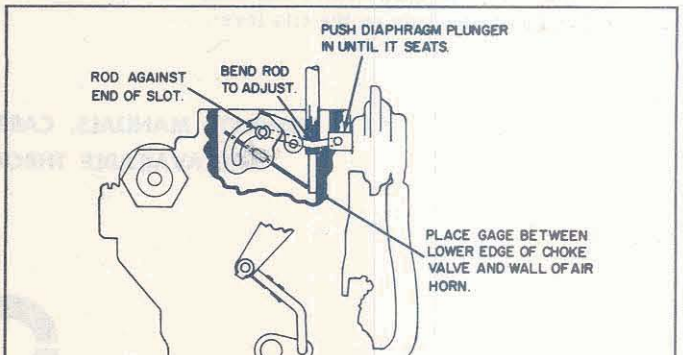
To adjust, bend the tang on the throttle lever so that when the vent valve just starts to open the proper gauge will just go between the throttle valve and the bore directly opposite the idle needle. Do not bend the spring arm on the vent valve as distortion may result.



FAST IDLE ADJUSTMENT
FIG. 5

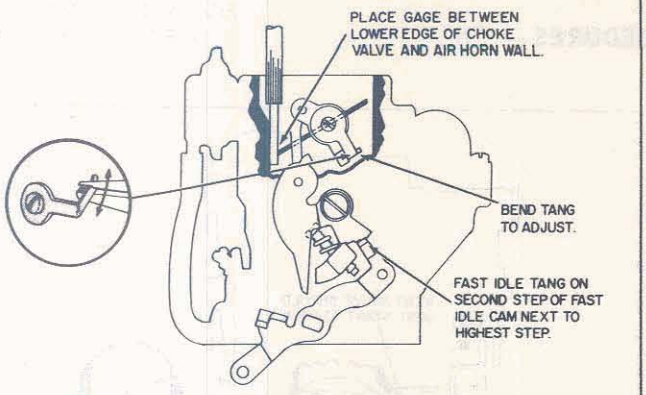
First set normal engine idle speed; then with choke valve wide open, turn fast idle adjusting screw so that there is a clearance as specified between the end of screw and tang on throttle lever.

Use feeler gauge for checking clearance, as shown.



VACUUM BREAK DIAPHRAGM ADJUSTMENT
FIG. 6

To adjust push diaphragm plunger inward until seated, and then close choke valve to point where connecting rod is to end of slot in choke lever. With choke valve in this position specified gauge should fit between lower edge of choke valve and inner air horn wall as shown. To adjust, bend connecting rod at point shown.

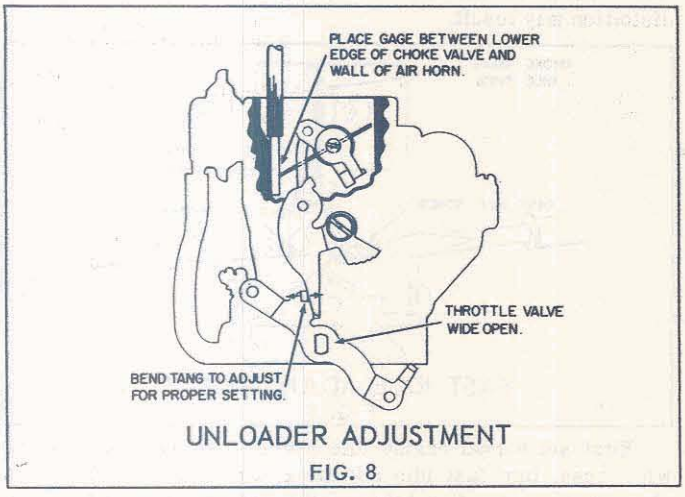


CHOKE ROD ADJUSTMENT
FIG. 7

To adjust, place fast idle tang on second step of fast idle cam next to highest step. Close choke valve so that trip lever on choke shaft just contacts choke tang on lever and collar assembly.

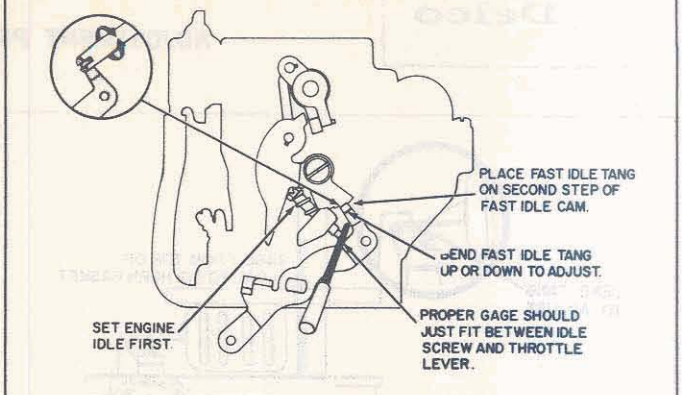
Specified gauge should just fit between lower edge of choke valve and inner air horn wall.

To adjust, bend tang on trip lever up or down as shown.



UNLOADER ADJUSTMENT
FIG. 8

To adjust, hold throttle valve wide open (accelerator pedal depressed to floor), then the specified gauge should just fit between lower edge of choke valve and inner air horn wall. To adjust, bend unloader tang on throttle lever.



FAST IDLE ADJUSTMENT
FIG. 9

To check this adjustment, place fast idle tang on the second step of the fast idle cam next to the highest step. With the idle speed screw set to normal idle position (approx. ¾ turn in from closed throttle valve) measure the clearance between the idle stop screw and edge of the throttle lever. Bend the fast idle tang up or down, to adjust.

COMPLETE MANUALS, CARBURETOR TOOLS AND GAUGES ARE AVAILABLE THROUGH UMS DISTRIBUTORS

ASK YOUR NEARBY United Delco DISTRIBUTOR

Delco Rochester