
Automatic Chokes By Engine Model

MODEL	DESCRIPTION	PART NO.
AEN	Automatic choke	VF57, VF57A, VF87A
ABN, AKN	Automatic choke	VF57, VF57A, VF87A
VE4D, VF4D	Automatic choke	VF57, VF57A, VF57B, VF87A
TE, TF	Automatic choke	VF57, VF57A, VF57B, VF87A
ACN, BKN	Automatic choke	VF57, VF57A, VF87A
AENL	Automatic choke	VF57, VF57A, VF87A
AENL	Automatic choke set-up (Obsolete)	VF88
AGN	Automatic choke	VF57, VF57A, VF57B, VF87A
AGND	Automatic choke set-up (Obsolete)	VF77D
TH	Automatic choke	VF57, VF57A, VF57B, VF87A
TH, THD, TJD	Automatic choke set-up (Obsolete)	VF90
VH4	Automatic choke	VF57, VF57A, VF57B, VF87A
VG4D	Automatic choke	VF57, VF57A, VF57B, VF87A
VG4D	Automatic choke set-up (Obsolete)	VF62B
V461D, V465D	Automatic choke set-up (Obsolete)	VF86
S12D, S14D	Automatic choke set-up (Obsolete)	VF96
VH4D	Automatic choke set-up	VF98
W4-1770	Automatic choke set-up	VF101

Automatic Chokes By Part Number

PART NO.	DESCRIPTION	MODEL
VF57, VF57A, VF87A	Automatic choke	AEN
VF57, VF57A, VF87A	Automatic choke	ABN, AKN
VF57, VF57A, VF57B, VF87A	Automatic choke	VE4D, VF4D
VF57, VF57A, VF57B, VF87A	Automatic choke	TE, TF
VF57, VF57A, VF87A	Automatic choke	ACN, BKN
VF57, VF57A, VF87A	Automatic choke	AENL
VF88	Automatic choke set-up	AENL
VF57, VF57A, VF57B, VF87A	Automatic choke	AGN
VF77D	Automatic choke set-up	AGND
VF57, VF57A, VF57B, VF87A	Automatic choke	TH
VF90	Automatic choke set-up	TH, THD, TJD
VF57, VF57A, VF57B, VF87A	Automatic choke	VH4
VF57, VF57A, VF57B, VF87A	Automatic choke	VG4D
VF62B	Automatic choke set-up	VG4D
VF86	Automatic choke set-up	V461D, V465D
VF96	Automatic choke set-up	S12D, S14D
VF98	Automatic choke set-up	VH4D
VF101	Automatic choke set-up	W4-1770

OPERATION ALL CHOKES EXCEPT VF86

The Sisson automatic choke is a device which, through the mediums of an electro magnet and a thermostat, automatically closes the carburetor choke valve for cold engine starting, and also regulates its degree of opening as the engine warms up.

After the engine starts, the amount of choke valve opening depends on the temperature of the engine. Consequently, there is no over-choking. Choking during starting and warm up is regulated automatically, providing much finer control than is ever possible with hand operation and thereby minimizing the possibility of incomplete starts.

The automatic choke is mounted on the exhaust pipe and a control rod connects it to the carburetor choke lever. The electric current required to operate the automatic choke is provided thru the wire which is connected to the starter switch.

When the starter switch is depressed, current flows to the electro magnet in the choke unit, and the armature lever is energized, closing the carburetor choke valve. There is a full or partial choke, according to engine temperatures. If the engine is hot, no choking is required and the automatic choke will be inoperative.

As soon as the engine starts and the starter circuit is broken, the electro magnet in the automatic choke is de-energized. The thermostat will continue to carry the burden of automatically adjusting the carburetor choke valve from the heat of the exhaust pipe until no further choke action is required.

OPERATION VF86

The choke assembly is a component part of the carburetor that automatically closes the carburetor choke plate for starting and regulates the degree of opening as the engine warms up. Its operation depends entirely upon a *counter-weighted choke lever*, the application of heat to the *thermostat spring*, and *manifold vacuum*. The choke lever *counter-weight* must be positioned 30° up from the horizontal centerline when carburetor choke plate is fully open. See above illustration.

While the engine is cold and inoperative the thermostat spring will hold the carburetor choke plate in a closed position. When the ignition is turned on and the engine is started, electric current connected to the element in choke cover will heat up the thermostat spring causing it to lose its tension. This enables the intake manifold vacuum to turn the choke shaft in a direction opposite to that of the spring tension, opening the choke and permitting normal engine operation.

When the ignition is shut off and engine is stopped, the *counter-weight* on choke lever will affect an *immediate closing* of the carburetor choke plate. This is necessary in the event the engine is re-started while still warm; even a *hot engine* of this type requires a *momentary choke* when starting.

Installation And Servicing: Model AEN

INSTALLATION

When installing or reassembling the Sisson automatic choke on the Model AEN engine, the following instructions should be followed to get the proper travel for the opening and closing of the choke.

1. Mount pipe nipple (6) and elbow (5) to exhaust outlet in cylinder block. Turn support pipe (2) securely into elbow (5) with the pad on the support pipe at a 45° angle as illustrated. Lock elbow and support pipe with set screws (9). Assemble exhaust coupling (11) to support pipe.
2. Mount automatic choke (4) to pad on support pipe (2) with screws (8) and lockwashers (7).
3. Insert end of control rod (3) into hole in carburetor choke lever with cotter pin hole inside lever and toward carburetor airhorn. Assemble cotter pin (10).
4. The position of the lever on the automatic choke will vary for different engine models, so in all probability it will be necessary to relocate the lever for the AEN engine.

First loosen clamp screw slightly on automatic choke lever and rotate lever to approximate *intermediate* starting position, as illustrated. The clamp screw, though loosened, should have enough tension on it so as to still rotate the choke lever shaft, as this is necessary in positioning the control rod and operating the automatic choke lever from the *intermediate* to the *closed* position. Pull up control rod (3) so that the carburetor choke lever is in the upper, *closed position*. Next, hook the other end of the control rod in the hole on the automatic choke lever, noting that the lever has to travel to the *closed position*. The automatic choke lever will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an intermediate or starting position, which will hold the carburetor choke lever partially open. This is the position of the automatic choke lever and carburetor choke lever on a cold engine. Tighten clamp screw on automatic choke lever.

When the starter switch is depressed, the lever on the automatic choke will jump from the *intermediate* to the *closed* position. When the starter switch is released and the engine starts, the lever will go back to the *intermediate* position and slowly to the *open* position as the engine warms up.

5. Assemble cotter pin (10) to control rod (3) at automatic choke lever. Connect wire from starter side of starting switch to terminal on automatic choke. The automatic choke is to receive electrical current *only* when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

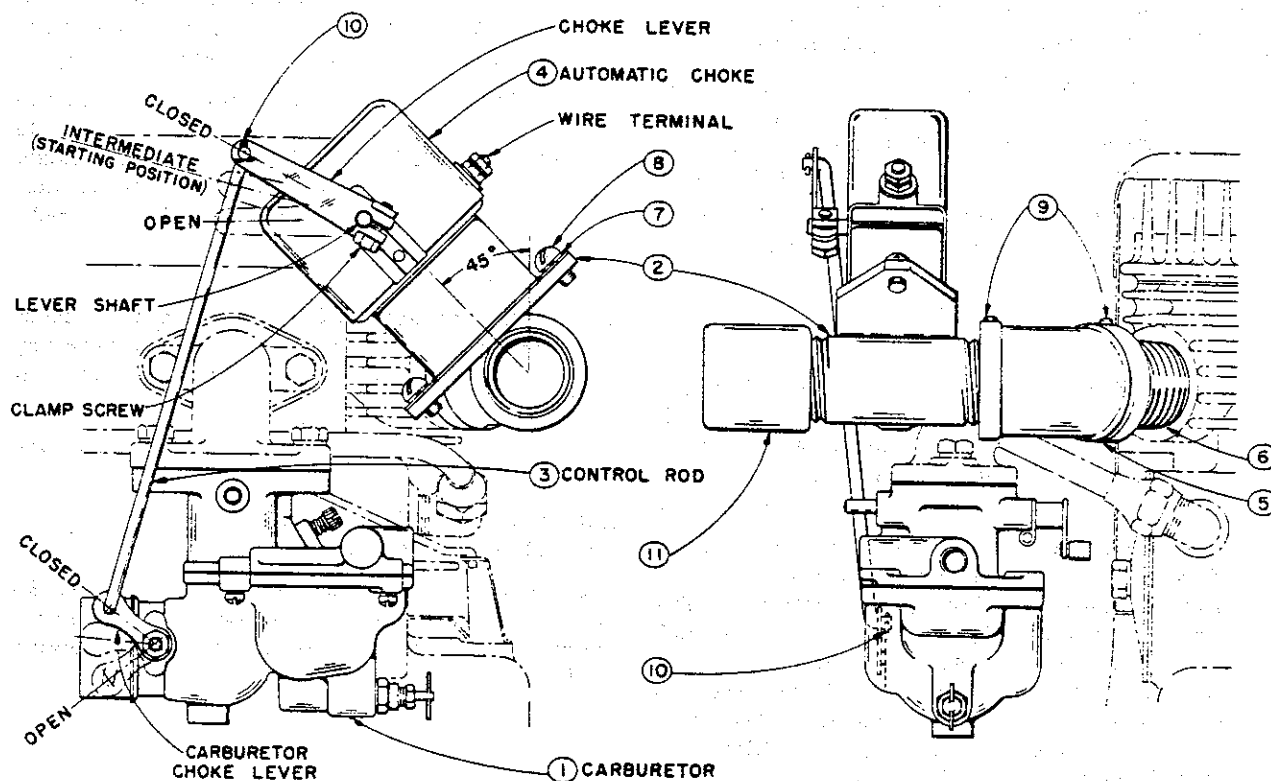
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF57, VF57A, VF87A Automatic Choke

USE WITH MODEL AEN



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ48AD	Carburetor (2000 RPM or over; NLA)	1	6	LJ156	Pipe nipple, 1" x 1-1/2" long, W.I. pipe	1
—	LZ48G	Carburetor (below 2000 engine RPM; NLA)	1	7	PE3	Lock washer, 1/4"	2
2	LJ189A	Support pipe (NLA)	1	8	XA33	Screw, 1/4"-20 thread x 3/8" long	2
3	VE592	Choke control rod (NLA)	1	9	XE65	Set screw, no. 10-32 thread x 1/4" long	2
4	VF57A	Sisson automatic choke, 6 volt, Pierce no. AC846 (NLA)	1	10	XI1	Cotter pin, 1/16" diameter x 1/2" long	2
—	VF87AS1	Sisson automatic choke, 12 volt, Pierce no. AC828	1	11	XK57	Pipe coupling, 1" (NLA)	1
5	XK120-1	Pipe elbow	1				

Installation And Servicing: Models ABN, AKN

INSTALLATION

When installing or reassembling the Sisson automatic choke on the ABN and AKN engines, the following instructions should be followed to get the proper travel for the opening and closing of the choke.

1. Turn support pipe (2) securely into exhaust outlet in cylinder block. With the pad on the support pipe in a vertical position, as illustrated, lock in place with screw (7). Assemble exhaust coupling (9).
2. Mount automatic choke (4), with wire terminal pointing down, to the pad on the support pipe (2) with screws (6) and lockwashers (5).
3. Insert end of control rod (3) into hole in carburetor choke lever. Assemble cotter pin (8).
4. The position of the lever on the automatic choke will vary for different engine models, so in all probability it will be necessary to reposition the lever for the ABN and AKN engines.

First, loosen clamp screw slightly on automatic choke lever and rotate lever to approximate *intermediate* starting position (see illustration). The clamp screw, though loosened, should have enough tension on it so as to still rotate the choke lever shaft, as this is necessary in positioning the control rod and operating the automatic choke lever from the *intermediate* to the *closed* position. Pull control rod (3) so that the carburetor choke lever is in the *closed position* as illustrated. Next, hook the other end of the control rod in the hole on the automatic choke lever, noting that the lever has to travel to the *closed position*. The automatic choke lever will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an intermediate or starting position, which will hold the carburetor choke lever partially open. This is the position of the automatic choke lever and carburetor choke lever on a cold engine. Tighten clamp screw on automatic choke lever.

When the starter switch is depressed, the lever on the automatic choke will jump from the *intermediate* to the *closed* position. When the starter switch is released and the engine starts, the lever will go back to the *intermediate* position and slowly to the *open* position as the engine warms up.

5. Assemble cotter pin (8) to control rod (3) at automatic choke lever. Connect wire from starter side of starting switch to terminal on automatic choke. The automatic choke is to receive electrical current *only* when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

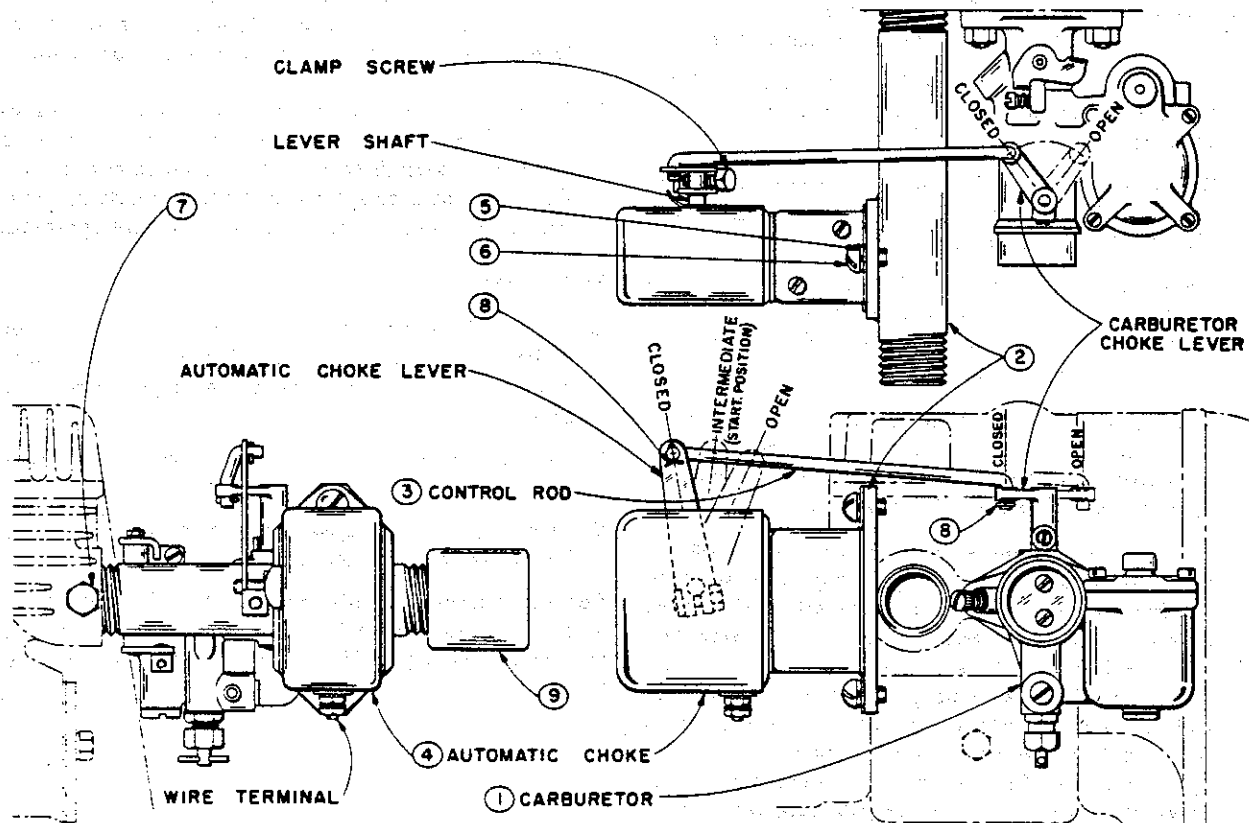
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF57, VF57A, VF87A Automatic Choke

USE WITH MODELS ABN, AKN



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ26-6	Carburetor assembly (ABN; NLA)	1	5	PE3	Lock washer, 1/4"	2
—	LZ26A11	Carburetor assembly (AKN)	1	6	XA33	Screw, 1/4"-20 thread x 3/8" long	2
2	LJ276A	Support pipe (NLA)	1	7	XD4	Screw, 1/4"-20 thread x 1/2" long	1
3	VE565A	Choke control rod	1	8	XI1	Cotter pin, 1/16" diameter x 1/2" long	2
4	VF57A	Sisson automatic choke, 6 volt, Pierce no. AC846 (NLA)	1	9	XK113	Pipe coupling, 3/4" (NLA)	1
—	VF87AS1	Sisson automatic choke, 12 volt, Pierco no. AC828	1				

Installation And Servicing: Models VE4D, VF4D

INSTALLATION

When installing or reassembling the Sisson automatic choke on the Models VE4 and VF4, the following instructions should be followed to obtain the proper travel for the opening and closing of the choke.

1. Mount **support pipe nipple** (3) to **exhaust outlet in manifold**, and tighten securely to position shown on diagram.
2. Mount **automatic choke** (5) to machined surface on **support pipe** (3) in position shown, with **screws** (7) and **lockwashers** (6).
3. Insert end of **control rod** (4) into **bushing** (2) and mount into hole in **carburetor choke lever**, with cotter pin hole outside and away from carburetor air horn. Assemble **cotter pin** (8).
4. The position of the **choke lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to relocate the lever for the **VE4** and **VF4** engines.

First loosen **clamp screw** slightly on **automatic choke lever** and rotate lever to approximate **intermediate** starting position, as illustrated. The **clamp screw**, though loosened, should have enough tension on it so as to still rotate the choke lever shaft, as this is necessary in positioning the control rod and operating the automatic choke lever from the **intermediate** to the **closed** position. Pull up **control rod** (4) so that the **carburetor choke lever** is in the upper, **closed position**. Next, hook the other end of the **control rod** in the hole on the **automatic choke lever**, noting that the lever has to travel to the **closed position**. The **automatic choke lever** will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an **intermediate** or **starting position**, which will hold the carburetor choke lever partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine. Tighten clamp screw on automatic choke lever.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the **closed** position. When the starter switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

5. Assemble cotter pin (8) to control rod (4) at **automatic choke lever**. Connect wire from starter side of starting switch to terminal on automatic choke. The automatic choke is to receive electrical current **only** when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

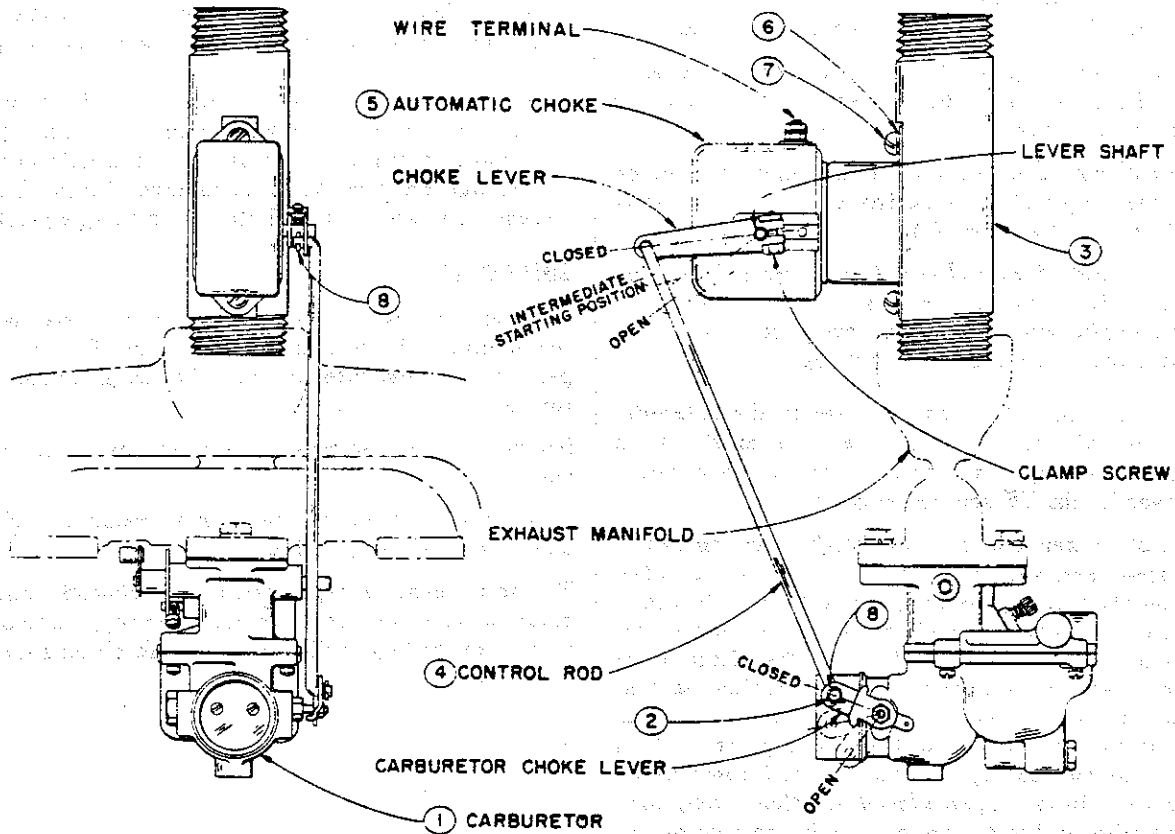
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF57, VF57A, VF57B, VF87A Automatic Choke

USE WITH MODELS VE4D, VF4D



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ48-4	Carburetor, VE4 (NLA)	1	—	VF57B	Automatic choke, 24 volt,	
—	LZ63-10	Carburetor, VF4	1	—	WE218-6	Pierce no. AC914 (NLA)	1
2	HF451	Bushing	1	—		Heat deflector	
3	LJ188-1	Support and exhaust pipe	1			(not illustrated; NLA)	1
4	VE594	Choke control rod	1	6	PE3	Lock washer, 1/4"	2
5	VF57A	Automatic choke, 6 volt,		7	XA33	Screw,	
		Pierce no. AC846 (NLA)	1			1/4"-20 thread x 3/8" long	2
—	VF87AS1	Automatic choke, 12 volt,		8	XI1	Cotter pin,	
		Pierce no. AC828	1			1/16" diameter x 1/2" long	2

Installation And Servicing: Models TE, TF

INSTALLATION

When installing or reassembling the Sisson automatic choke on the Models TE and TF, the following instructions should be followed to obtain the proper travel for the opening and closing of the choke.

1. Mount **support pipe nipple** (4) to exhaust outlet in **manifold** (2), and tighten securely to position shown on diagram.
2. Mount **automatic choke** (6) to machined surface on **support pipe** (4) in position shown, with screws (8) and lockwashers (7).
3. Insert end of **control rod** (5) into **bushing** (3) and mount into hole in **carburetor choke lever** with cotter pin hole outside and away from carburetor air horn. Assemble **cotter pin** (9).
4. The position of the **choke lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to relocate the lever for the **TE** and **TF** engines.

First loosen **clamp screw** slightly on **automatic choke lever** and rotate lever to approximate **intermediate** starting position, as illustrated. The **clamp screw**, though loosened, should have enough tension on it so as to still rotate the **choke lever shaft**, as this is necessary in positioning the control rod and operating the automatic choke lever from the **intermediate** to the **closed** position. Pull up **control rod** (5) so that the **carburetor choke lever** is in the upper, **closed position**. Next, hook the other end of the **control rod** in the hole on the **automatic choke lever**, noting that the lever has to travel to the **closed position**. The automatic choke lever will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an **intermediate or starting position**, which will hold the carburetor choke lever partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine. Tighten clamp screw on automatic choke lever.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the **closed** position. When the starter switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

5. Assemble cotter pin (9) to control rod (5) at **automatic choke lever**. Connect wire from starter side of starting switch to terminal on automatic choke. The automatic choke is to receive electrical current **only** when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

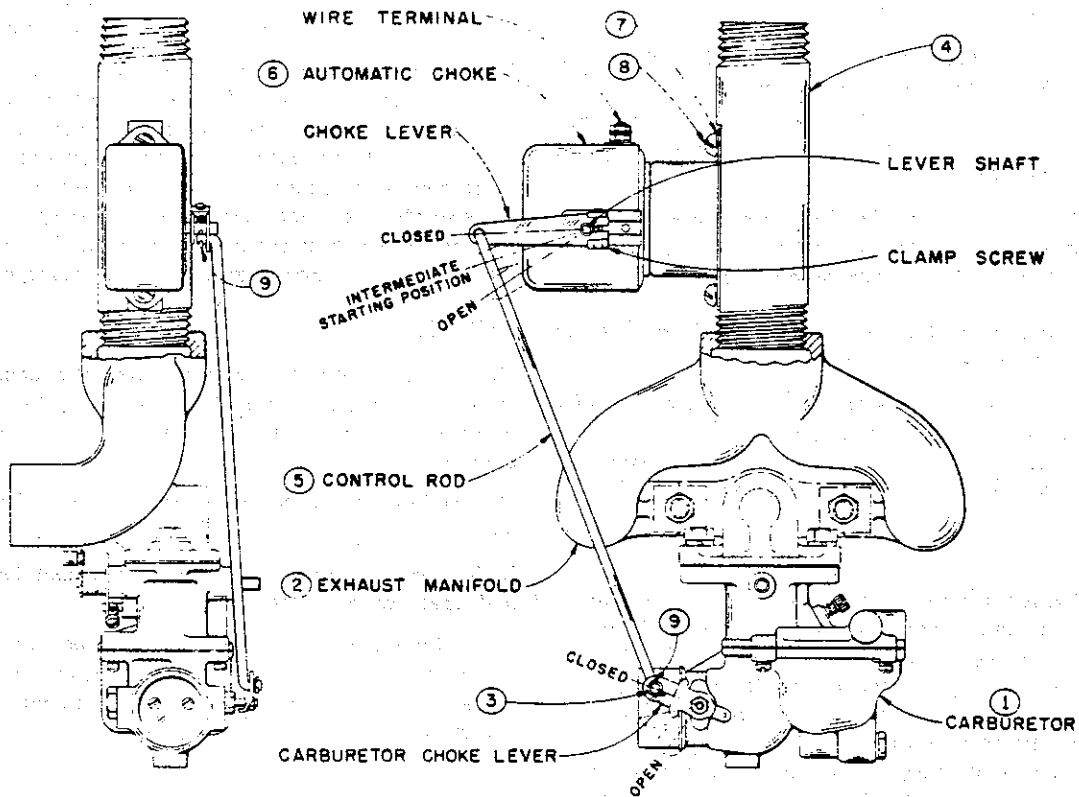
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF57, VF57A, VF57B, VF87A Automatic Choke

USE WITH MODELS TE, TF



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ48L1	Carburetor, TE (NLA)	1	—	VF87AS1	Automatic choke, 12 volt, Pierce no. AC828	1
—	LZ48D1	Carburetor, TE (NLA)	1	—	VF57B	Automatic choke, 24 volt, Pierce no. AC914 (NLA)	1
—	LZ48J1	Carburetor, TF (NLA)	1	7	PE3	Lock washer, 1/4"	2
—	LZ63C13S1	Carburetor, TF	1	8	XA33	Screw, 1/4"-20 thread x 3/8" long	2
2	LD242-1	Exhaust manifold	1	9	XI1	Cotter pin, 1/16" diameter x 1/2" long	2
3	HF451	Bushing	1				
4	LJ188-1	Support and exhaust pipe	1				
5	VE810	Choke control rod	1				
6	VF57A	Automatic choke, 6 volt, Pierce no. AC846 (NLA)	1				

Installation And Servicing: Models ACN, BKN

INSTALLATION

When installing or reassembling the Sisson automatic choke on these engines, the following instructions should be followed to get the proper travel for the opening and closing of the choke.

1. Screw *locknut* (3) on to *support pipe* (2). Turn *support pipe* (2) securely into exhaust outlet in cylinder block. With the pad on the support pipe in a vertical position, as illustrated, lock in place with *locknut* (3).
2. Mount *automatic choke* (5), with *wire terminal* pointing down, to the pad on the *support pipe* (2) with *screws* (7) and *lockwashers* (6).
3. Insert end of *control rod* (4) into hole in *carburetor choke lever*. Assemble *cotter pin* (8).
4. The position of the *lever* on the *automatic choke* will vary for different engine models, so in all probability it will be necessary to reposition the lever for the ACN and BKN engines.

First, loosen *clamp screw* slightly on *automatic choke lever* and rotate lever to approximate *intermediate* starting position (see illustration). The *clamp screw*, though loosened, should have enough tension on it so as to still rotate the choke *lever shaft*, as this is necessary in positioning the control rod and operating the automatic choke lever from the *intermediate* to the *closed* position. Pull *control rod* (4) so that the *carburetor choke lever* is in the *closed position* as illustrated. Next, hook the other end of the control rod in the hole on the automatic choke lever, noting that the lever has to travel to the *closed position*. The automatic choke lever will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an *intermediate* or *starting position*, which will hold the carburetor choke lever partially open. This is the position of the *automatic choke lever* and *carburetor choke lever* on a cold engine. Tighten *clamp screw* on *automatic choke lever*.

When the starter switch is depressed, the lever on the automatic choke will jump from the *intermediate* to the *closed* position. When the starter switch is released and the engine starts, the lever will go back to the *intermediate* position and slowly to the *open* position as the engine warms up.

5. Assemble cotter pin (8) to control rod (4) at automatic choke lever. Connect ignition wire from starter side of starter switch, or solenoid switch, to terminal on automatic choke, for engines with starter and generator. With combination motor-generator, connect wire to center terminal on solenoid. The automatic choke is to receive electrical current *only* when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

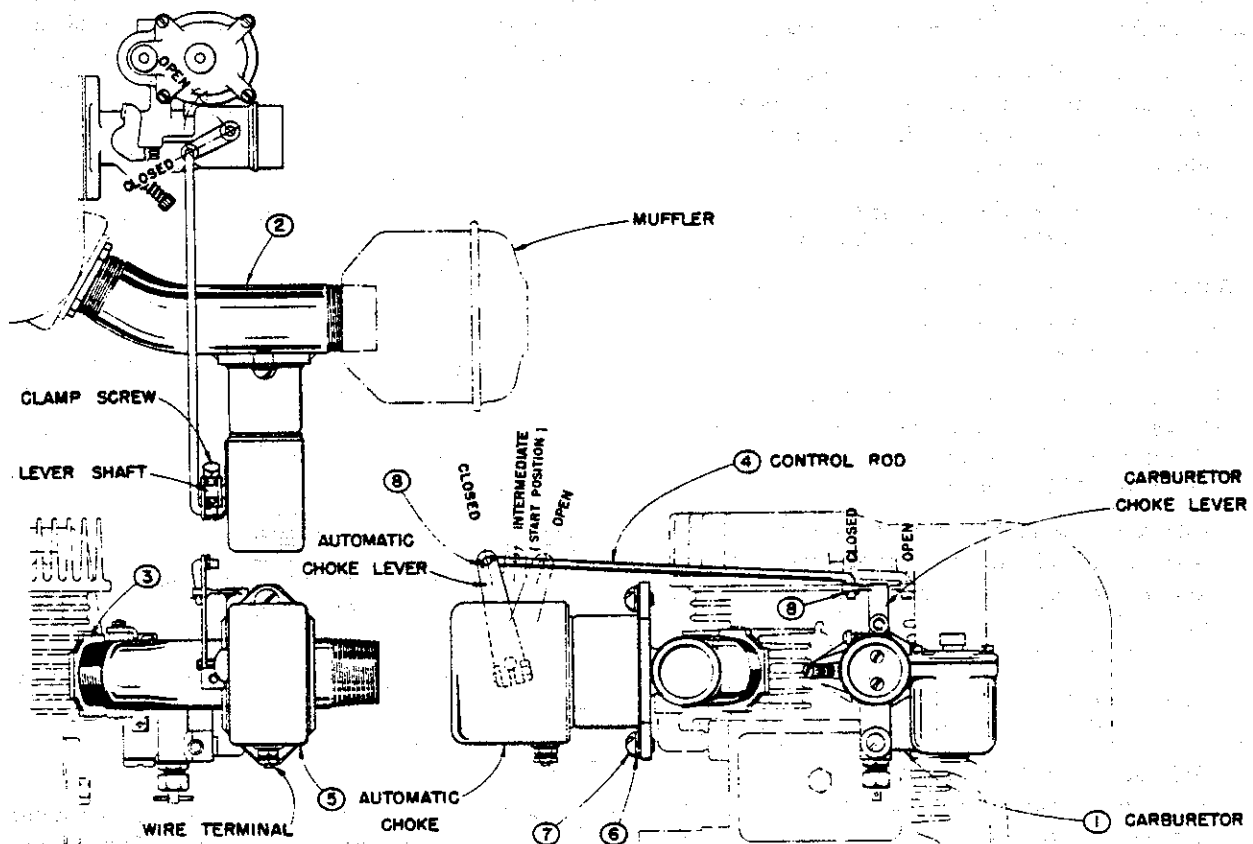
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF57, VF57A, VF87A Automatic Choke

USE WITH MODELS ACN, BKN



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ26-6	Carburetor assembly, ACN (NLA)	1	—	VF87AS1	Sisson automatic choke, 12 volt, Pierce no. AC828	1
2	LJ381	Support pipe	1	6	PE3	Lock washer, 1/4"	2
—	LZ26A11	Carburetor assembly, BKN	1	7	XA33	Screw, 1/4"-20 thread x 3/8" long	2
3	PD204	Locknut	1	8	XI1	Cotter pin, 1/16" diameter x 1/2" long	2
4	VE565A	Choke control rod	1				
5	VF57A	Sisson automatic choke, 6 volt, Pierce no. AC846 (NLA)	1				

Installation And Servicing: Model AENL

INSTALLATION

When installing or reassembling the automatic choke on this engine, the following instructions should be followed, to obtain the proper travel for opening and closing of the choke. Refer to Fig's. 1 and 2.

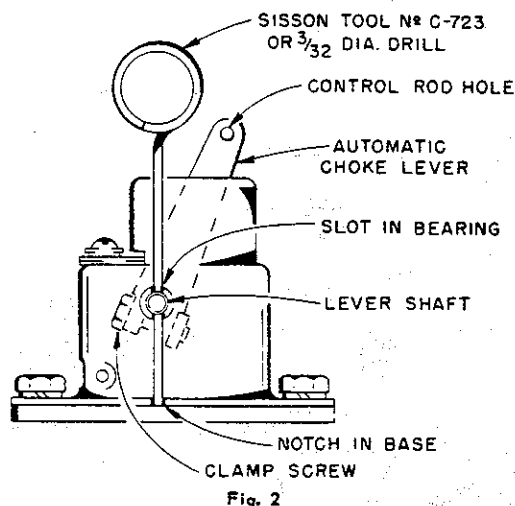
1. Screw **locknut** (3) on **support pipe** (2) and turn pipe in cylinder block, with the pad on the support pipe at a 60° angle as illustrated. Secure support pipe in place with **locknut** (3).
2. Mount **automatic choke** (6) to pad on **support pipe** (2) with **screws** (8) and **lockwashers** (9).
3. Assemble end of **control rod** (5) to the inside of **carburetor choke lever** and secure in place with **retaining clip** (4).
4. The position of the **lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to relocate the lever for the AENL engine.
 - a. With reference to Fig. 2; move **automatic choke lever** until hole in **lever shaft** lines up with **slot in bearing**. Then, insert Sisson adjusting tool C-723 down into **notch in base**. If tool is not available, use a 3/32 diameter drill.
 - b. Loosen **clamp screw** on automatic choke lever, just enough so lever can be turned on the shaft.
 - c. Pull up on **control rod** (5) Fig. 1, so that the **carburetor choke lever** is in the upper, or **closed position**. Retain rod in this position.
 - d. Rotate **automatic choke lever** until hole at end of lever lines up with bent end of control rod. (Rod pulled up in closed choke position). Mount control rod to lever by means of **retaining clip** (4).
 - e. Tighten **clamp screw** on lever and remove adjusting tool (or 3/32 drill).

5. When removing adjusting tool from lever shaft, note that the automatic choke lever will spring back to an **intermediate** or **starting position**, which will hold the carburetor choke valve partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the **closed position**. When the starter

switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

6. Connect **ignition wire** (7) from starter side of starter switch, or solenoid switch, to **terminal** on automatic choke, for engines with starter and generator. With combination motor-generator; connect wire to center terminal on solenoid. The



automatic choke is to receive electrical current **only** when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

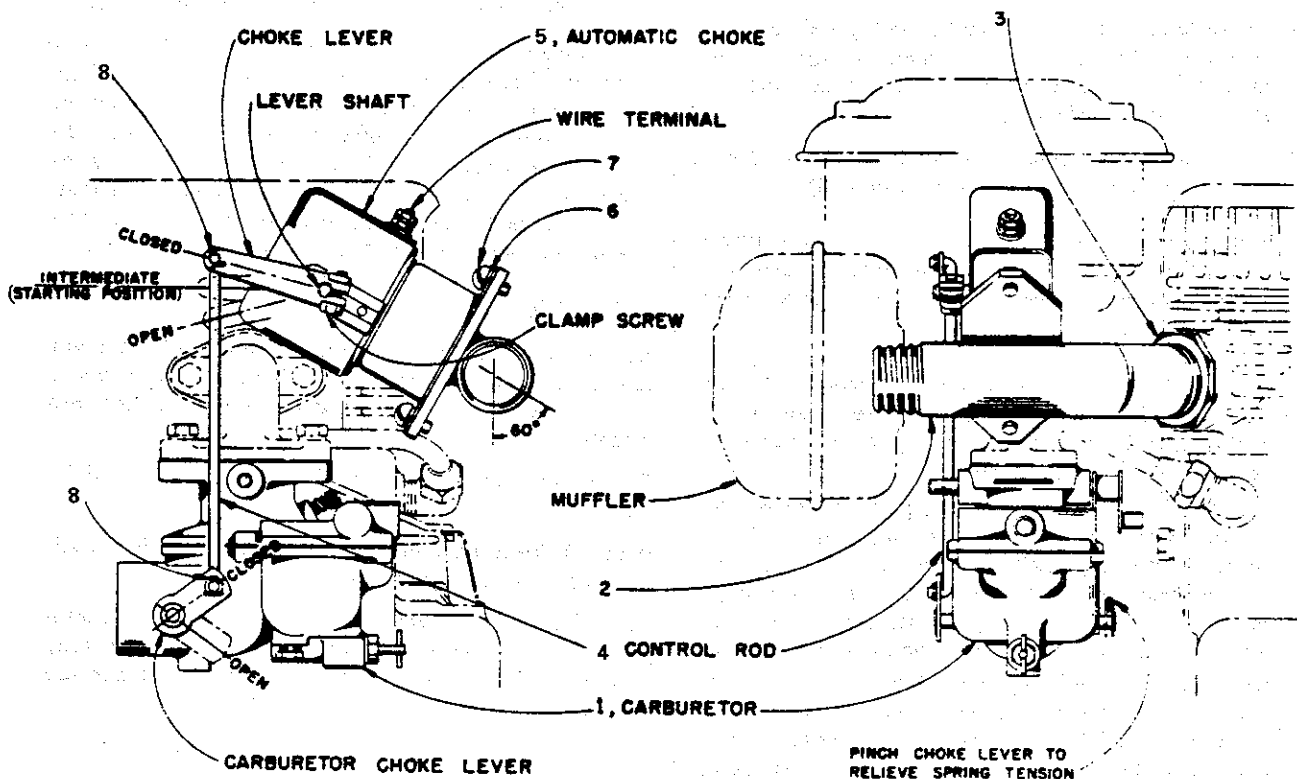
Do not lubricate automatic choke or any of the linkage.

If the choke lever or choke valve is sticking due to an accumulation of oil or gum, wash with alcohol or carburetor cleaning fluid.

Check cable from starter switch to automatic choke to be sure the electrical circuit is completed. There must be a good contact between automatic choke and exhaust pipe to complete the ground circuit. Check for a complete circuit through the choke by holding a screw driver close to the magnet core while the starter is being operated. If there is an electrical circuit, the screw driver will be drawn against the magnet core.

VF57, VF57A, VF87A Automatic Choke

USE WITH MODEL AENL



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ63E4	Carburetor	1	—	VF87AS1	Sisson automatic choke, 12 volt, Pierce no. AC828	1
2	LJ390	Support pipe (NLA)	1	6	PE3	Lock washer, 1/4"	2
3	PD204	Locknut	1	7	XA33	Screw, 1/4"-20 thread x 3/8" long	2
4	VE811	Choke control rod	1	8	XI1	Cotter pin, 1/16" diameter x 1/2" long	2
5	VF57A	Sisson automatic choke, 6 volt, Pierce no. AC846 (NLA)	1				

Installation And Servicing: Model AENL

INSTALLATION

When installing or reassembling the Sisson automatic choke on this engine, the following instructions should be followed to get the proper travel for the opening and closing of the choke.

1. Screw **locknut** (3) on **support pipe** (2) and turn pipe in cylinder block, with the pad on the support pipe at a 60° angle as illustrated. Secure support pipe in place with **locknut** (3).
2. Mount **automatic choke** (5) to pad on **support pipe** (2) with **screws** (7) and **lockwashers** (6).
3. Insert end of **control rod** (4) into hole in **carburetor choke lever** with cotter pin hole outside lever and away from carburetor air horn. Assemble **cotter pin** (8).
4. The position of the **lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to relocate the lever for the AENL engine.

First, loosen **clamp screw** slightly on **automatic choke lever** and rotate lever to approximate **intermediate** starting position (see illustration). The **clamp screw**, though loosened, should have enough tension on it so as to still rotate the choke **lever shaft**, as this is necessary in positioning the control rod and operating the automatic choke lever from the **intermediate** to the **closed** position. Pull up **control rod** (4) so that the **carburetor choke lever** is in the upper, **closed position**. Next, hook the other end of the control rod in the hole on the automatic choke lever, noting that the lever has to travel to the **closed position**. The automatic choke lever will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an **intermediate or starting position**, which will hold the carburetor choke lever partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine. Tighten **clamp screw** on automatic **choke lever**.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the **closed** position. When the starter switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

5. Assemble cotter pin (8) to control rod (4) at automatic choke lever. Connect ignition wire from starter side of starter switch, or solenoid switch, to terminal on automatic choke, for engines with starter and generator. With combination motor-generator, connect wire to center terminal on solenoid. The automatic choke is to receive electrical current only when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF88 Automatic Choke Set-Up

USE WITH MODEL AENL

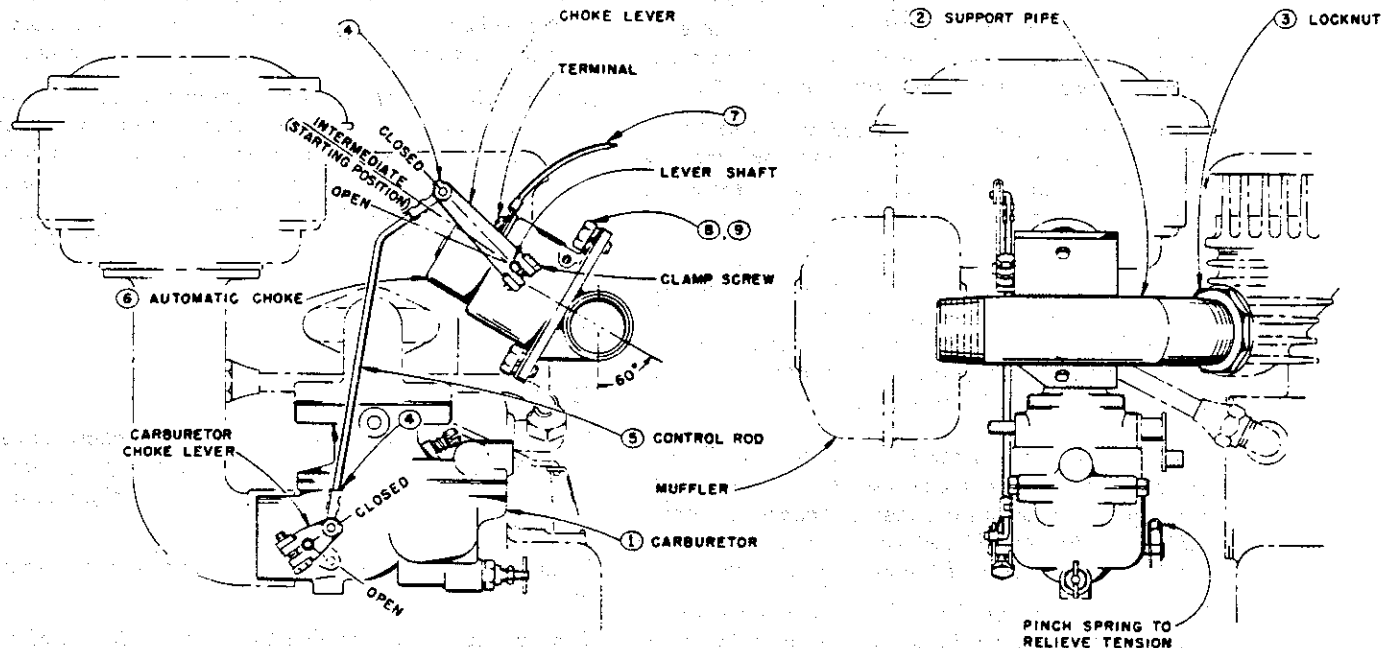


Fig. 1

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ63E4S1	Carburetor assembly	1	—	VF87B	Sisson automatic choke, 24 volt (NLA)	1
2	LJ390A	Support pipe (NLA)	1	7	YL353-23	Ignition wire	1
3	PD204	Locknut	1	8	PE3	Lock washer, 1/4"	2
4	PK158	Clip	2	9	XA33	Screw, 1/4"-20 thread x 3/8" long	2
5	VE811	Control rod	1				
6	VF87	Sisson automatic choke, 6 volt (NLA)	1				
—	VF87A	Sisson automatic choke, 12 volt	1				

Installation And Servicing: Model AGN

INSTALLATION

When installing or reassembling the Sisson automatic choke on this engine, the following instructions should be followed to get the proper travel for the opening and closing of the choke.

1. Screw **locknut** (4) on to **support pipe** (3) and turn pipe into cylinder block, with the pad on the support pipe in a horizontal position, as illustrated. Secure support pipe in place with locknut (4).
2. Mount **automatic choke** (10) to pad on **support pipe** (3) with **screws** (14) and (15), and **lockwashers** (12). At the same time, assemble **support strap** (6), from support pipe to **inlet manifold flange**, as shown.
3. Turn **support stud** (5) into **inlet manifold**. Attach **bell crank lever** (7) to support stud with **lockwasher** (12) and **nut** (11), being sure that the **long arm** of the bell crank lever is toward the automatic choke, as shown in illustration.
4. Insert end of **control rod** (9) into **bushing** (2) and mount into hole in **carburetor choke lever**, with cotter pin hole toward the inside. Assemble **washer** (13) and **cotter pin** (17). Attach other end of control rod to the **short arm** of the bell crank lever.
5. The position of the **choke lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to relocate the lever for the AGN engine.

First loosen **clamp screw** slightly on automatic **choke lever** and rotate lever to approximate **intermediate** starting position, as illustrated. The **clamp screw**, though loosened, should have enough tension on it so as to still rotate the **choke lever shaft**, as this is necessary in positioning the control rod and operating the automatic choke lever from the **intermediate** to the **closed** position. Mount **control rod** (8) into **bell crank lever** (7). Pull on control rod (8) so that the **carburetor choke lever** is in the upper, **closed position**. Next, hook the other end of the **control rod** in the hole on the **automatic choke lever**, noting that the lever has to travel to the **closed position**. The automatic choke lever will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an **intermediate** or **starting position**, which will hold the carburetor choke lever partially open. This is the position of the **automatic choke lever**

and **carburetor choke lever** on a cold engine. Tighten **clamp screw** on automatic **choke lever**.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the closed position. When the starter switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

6. Assemble **cotter pins** (16) to **control rod** (8) at automatic choke lever and bell crank lever. Connect ignition wire from starter side of starter switch, or solenoid switch, to terminal on automatic choke. The automatic choke is to receive electrical current **only** when engine starter is being operated.

SERVICING

Be sure that control rods from automatic choke lever and carburetor choke lever are not binding. Remove any paint or dirt from external parts that might cause this trouble.

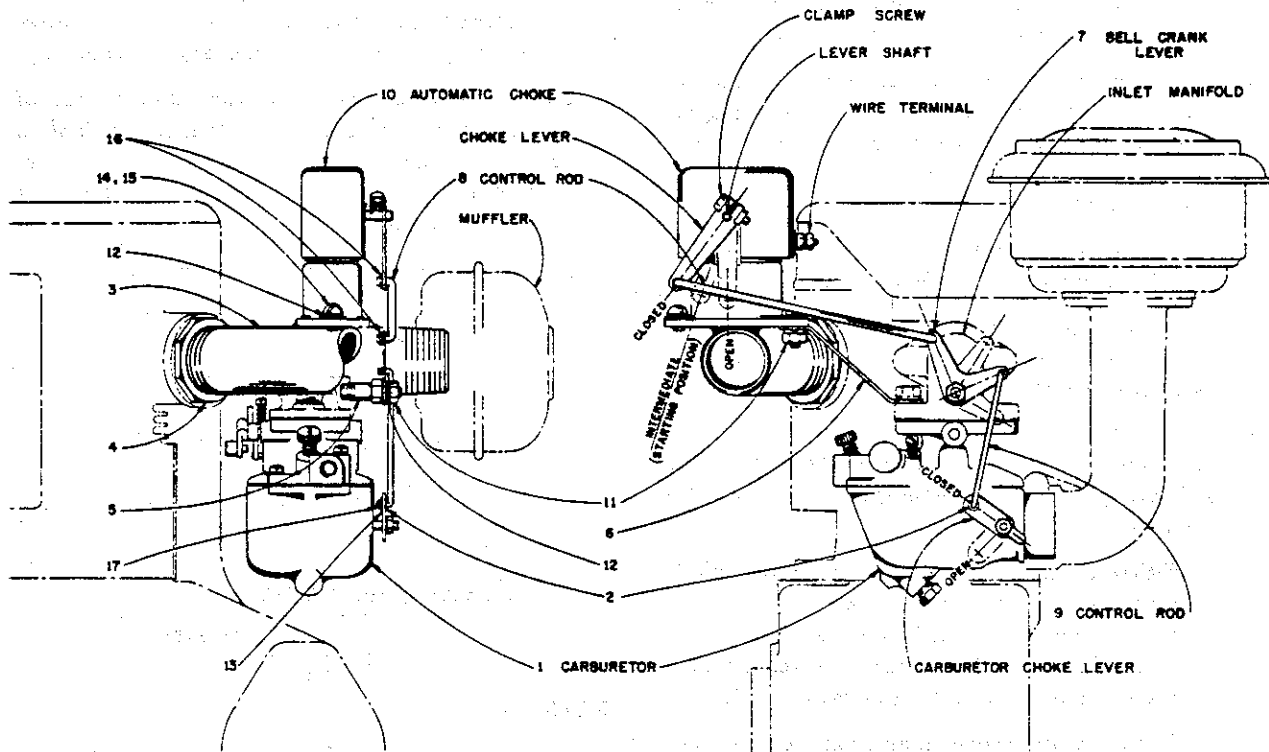
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF57, VF57A, VF57B, VF87A Automatic Choke

USE WITH MODEL AGN



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ64A	Carburetor, Marvel-Schebler (NLA)	1	—	VF57B	Automatic choke, 24 volt, Pierce no. AC914 (NLA)	1
2	HF451A	Bushing (NLA)	1	11	PD77	Nut, 1/4"-20 thread	2
3	LJ388A	Support and exhaust pipe	1	12	PE3	Lock washer, 1/4"	3
4	PD215	Locknut	1	13	PH253	Washer, 9/16" I.D. x 3/8" O.D. x 1/32" thick	1
5	PI186	Support stud (NLA)	1	14	XA33	Screw, 1/4"-20 thread x 3/8" long	1
6	PG872	Support strap (NLA)	1	15	XA36	Screw, 1/4"-20 thread x 3/4" long	1
7	VB177-2	Bell crank lever (NLA)	1	16	XI1	Cotter pin, 1/16" x 1/2" long	2
8	VE810	Control rod, automatic choke	1	17	XI32	Cotter pin, 3/64" x 3/8" long	2
9	VE810	Control rod, carburetor choke ...	1				
10	VF57A	Automatic choke, 6 volt, Pierce no. AC846 (NLA)	1				
—	VF87AS1	Automatic choke, 12 volt, Pierce no. AC828	1				

Installation And Servicing: Model AGND

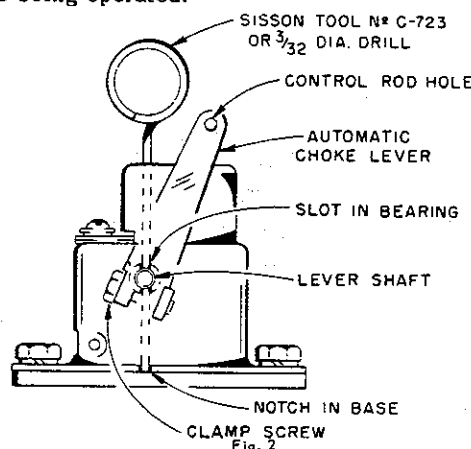
INSTALLATION

When installing or reassembling the automatic choke, the following instructions should be followed to obtain the proper amount of control rod movement for opening and closing the choke. Refer to Fig's. 1 and 2.

1. Screw **locknut** (3) on **support pipe** (2) and turn pipe tight into cylinder block until mounting surface for automatic choke is in a horizontal position as illustrated. Secure support pipe in place with **locknut** (3).
2. Mount **automatic choke** (7) to pad on **support pipe** (2) with **screws** (9), and **lockwashers** (10).
3. Assemble end of **control rod** (6) to the outside of **carburetor-choke lever** and secure in place with **retaining clip** (5).
4. The position of the **lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to relocate the lever for the AGND engine.
 - a. With reference to Fig. 2; move **automatic choke lever** until hole in **lever shaft** lines up with **slot in bearing**. Then, insert Sisson adjusting tool C-723 down into **notch in base**. If tool is not available, use a 3/32 diameter drill.
 - b. Loosen **clamp screw** on automatic choke lever, just enough so lever can be turned on the shaft.
 - c. Pull up on **control rod** (6) Fig. 1, so that the **carburetor choke lever** is in the upper, or **closed position**. Retain rod in this position.
 - d. Rotate **automatic choke lever** until hole at end of lever lines up with bent end of control rod. (Rod pulled up in closed choke position). Mount control rod to lever by means of **retaining clip** (4).
 - e. Tighten **clamp screw** on lever and remove adjusting tool (or 3/32 drill).
5. When removing adjusting tool from lever shaft, note that the automatic choke lever will spring back to an **intermediate** or **starting position**, which will hold the carburetor choke valve partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the **closed** position. When the starter switch is released and the engine starts, the lever will return to the **intermediate** position and slowly to the **open** position as the engine warms up.

6. Connect **ignition wire** (8) from starter side of starter switch, or solenoid switch, to **terminal** on automatic choke. The automatic choke is to receive electrical current **only** when engine starter is being operated.



SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

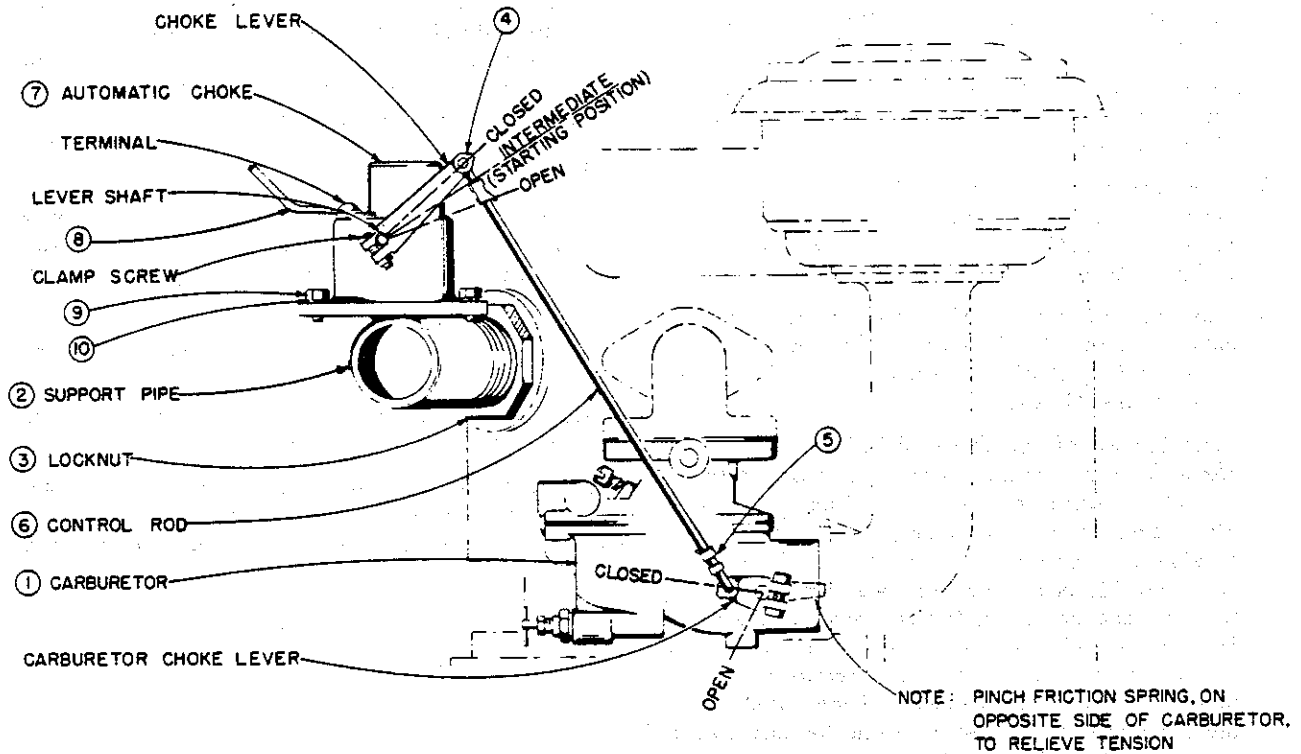
Do not lubricate automatic choke or any of the linkage.

If the choke lever or choke valve is sticking due to an accumulation of oil or gum, wash with alcohol or carburetor cleaning fluid.

Check cable from starter switch to automatic choke to be sure the electrical circuit is completed. There must be a good contact between automatic choke and exhaust pipe to complete the ground circuit. Check for a complete circuit through the choke by holding a screw driver close to the magnet core while the starter is being operated. If there is a closed circuit, the screw driver will be drawn against the magnet core.

VF77D Automatic Choke Set-Up

USE WITH MODEL AGND



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ63AS1	Carburetor	1	—	VF89A	Automatic choke, 12 volt	1
2	LJ388A	Support and exhaust pipe	1	—	VF89B	Automatic choke, 24 volt (NLA)	1
3	PD215	Locknut	1	8	YL353-27	Ignition wire	1
4	PK159	Clip, left	1	9	XA33	Screw, 1/4"-20 thread x 3/8" long	2
5	PK158	Clip, right	1	10	PE3	Lock washer, 1/4"	2
6	VE810	Choke control rod	1				
7	VF89	Automatic choke, 6 volt (NLA)	1				

Installation And Servicing: Model TH

INSTALLATION

When installing or reassembling the Sisson automatic choke on this engine, the following instructions should be followed to obtain the proper travel for the opening and closing of the choke.

1. Mount **support pipe nipple** (4) to exhaust outlet in **exhaust manifold** (2), and tighten securely to position shown on diagram. On power unit engines, lock pipe in place with **set screw** (9).
2. Mount **automatic choke** (6) to machined surface on **support pipe** (4) in position shown, with **screws** (8) and **lockwashers** (7).
3. Insert end of **control rod** (5) into **bushing** (3) and mount into hole in **carburetor choke lever** with cotter pin hole outside and away from carburetor air horn. Assemble **cotter pin** (10).
4. The position of the **choke lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to relocate the lever for the TH engine.

First loosen **clamp screw** slightly on **automatic choke lever** and rotate lever to approximate **intermediate** starting position, as illustrated. The **clamp screw**, though loosened, should have enough tension on it so as to still rotate the **choke lever shaft**, as this is necessary in positioning the control rod and operating the automatic choke lever from the **intermediate** to the **closed** position. Pull up **control rod** (5) so that the **carburetor choke lever** is in the upper, **closed position**. Next, hook the other end of the **control rod** in the hole on the **automatic choke lever**, noting that the lever has to travel to the **closed position**. The automatic choke lever will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an **intermediate** or **starting position**, which will hold the carburetor choke lever partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine. Tighten **clamp screw** on automatic choke lever.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the **closed** position. When the starter switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

5. Assemble cotter pin (10) to control rod (5) at **automatic choke lever**. Connect ignition wire from starter side of starter switch, or solenoid switch, to terminal on automatic choke. The automatic choke is to receive electrical current **only** when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

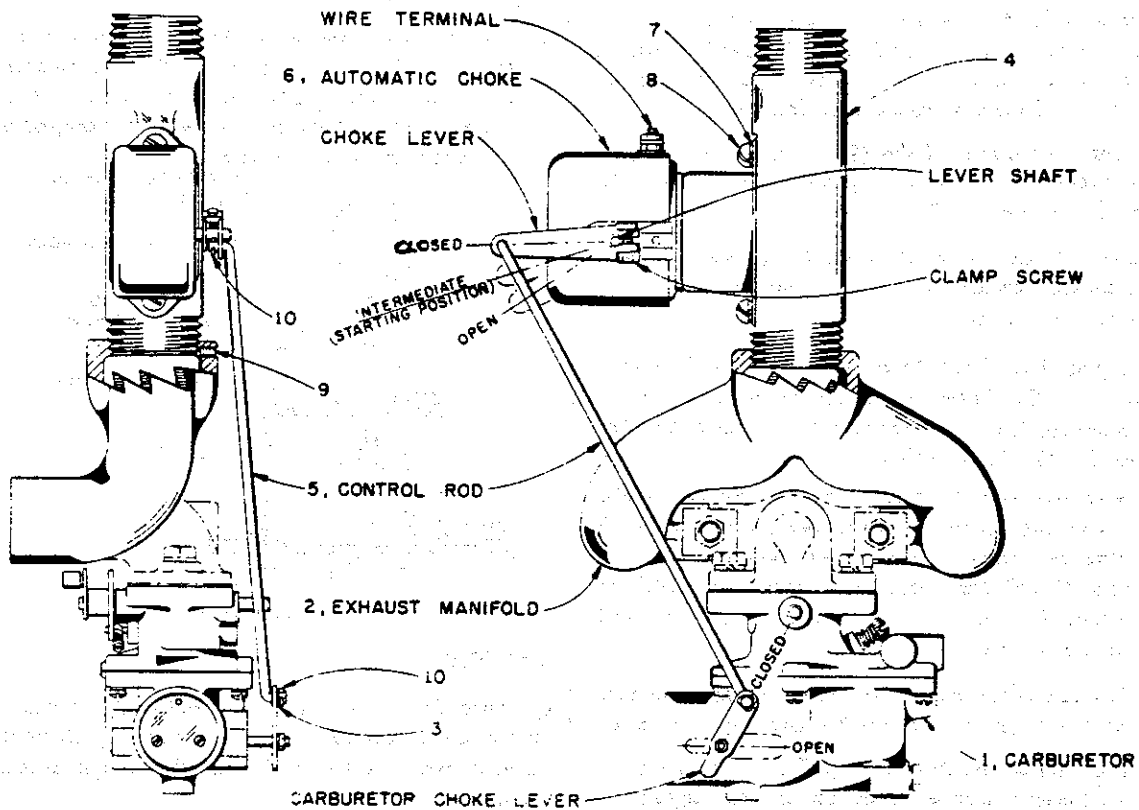
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF57, VF57A, VF57B, VF87A Automatic Choke

USE WITH MODEL TH



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ63C	Carburetor, Zenith no. 12158	1	—	VF57B	Automatic choke, 24 volt, Pierce no. AC914 (NLA)	1
2	LD242-4	Exhaust manifold	1	7	PE3	Lock washer, 1/4"	2
3	HF451	Bushing	1	8	XA33	Screw, 1/4"-20 thread x 3/8" long	2
4	LJ188-1	Support and exhaust pipe	1	9	XE65	Set screw, no. 10-32 thread x 1/4" long	1
5	VE810	Choke control rod	1	10	X11	Cotter pin, 1/16" diameter x 1/2" long	2
6	VF57A	Automatic choke, 6 volt, Pierce no. AC846 (NLA)	1				
—	VF87AS1	Automatic choke, 12 volt, Pierce no. AC828	1				

Installation And Servicing: Models TH, THD, TJD

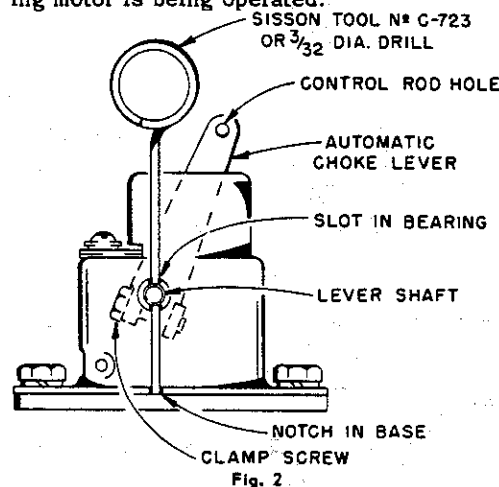
INSTALLATION

When installing or reassembling the automatic choke, the following instructions should be followed, to obtain proper travel for opening and closing of the choke. Refer to Fig's. 1 and 2.

1. Screw **locknut** (4) on **support pipe** (3) and turn pipe tight into **exhaust manifold** (2), until mounting surface for automatic choke is in position shown in Fig. 1. Secure in place with **locknut** (4).
2. Mount **automatic choke** (9) to machined surface on **support pipe** (3) with **gasket** (7), **screws** (12) and **lockwashers** (11).
3. Assemble end of **control rod** (8) to the inside of **carburetor choke lever** and secure in place with **retaining clip** (5).
4. The position of the **lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to re-position the lever for the THD engine.
 - a. With reference to Fig. 2; move **automatic choke lever** until hole in **lever shaft** lines up with **slot in bearing**. Then insert **Sisson adjusting tool C-723** thru hole and down into **notch in base**. If tool is not available, use a $\frac{3}{32}$ diameter drill.
 - b. Loosen **clamp screw** on automatic choke lever, just enough so lever can be turned on the shaft.
 - c. Pull up on **control rod** (8) Fig. 1, so that the **carburetor choke lever** is in the upper, or **closed position**. Retain rod in this position.
 - d. Rotate **automatic choke lever** until hole at end of lever lines up with bent end of control rod. (Rod pulled up in closed choke position). Mount control rod to lever by means of **retaining clip** (6).
 - e. Tighten **clamp screw** on lever and remove adjusting tool (or $\frac{3}{32}$ drill).
5. When removing adjusting tool from lever shaft, note that the automatic choke lever will spring back to an **intermediate** or **starting position**, which will hold the carburetor choke valve partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the **closed** position. When the starter switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

6. Connect **ignition wire** (10) from starter side of starter switch, or solenoid switch, to **terminal** on automatic choke. The automatic choke is to receive electrical current **only** when engine starting motor is being operated.



SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

Do not lubricate automatic choke or any of the linkage.

If the choke lever or choke valve is sticking due to an accumulation of oil or gum, wash with alcohol or carburetor cleaning fluid.

Check wire from starter switch to automatic choke to be sure the electrical circuit is completed. There must be a good contact between automatic choke and exhaust pipe to complete the ground circuit. Check for a complete circuit through the choke by holding a screw driver close to the magnet core while the starter is being operated. If there is an electrical circuit, the screw driver will be drawn against the magnet core.

VF90 Automatic Choke Set-Up

USE WITH MODELS TH, THD, TJD

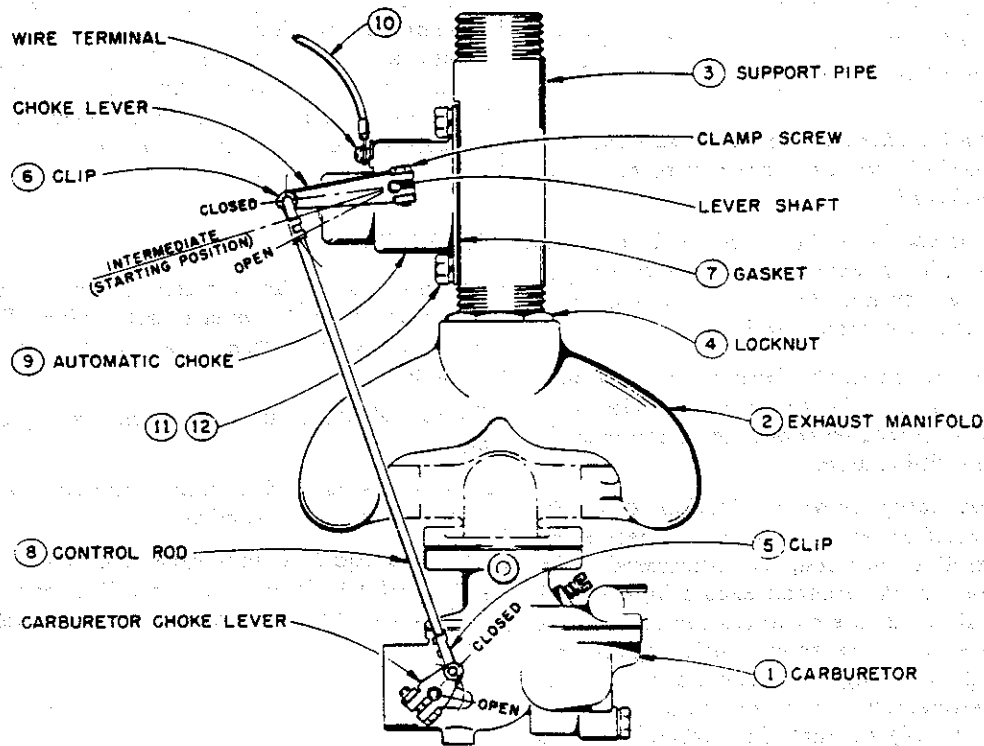


Fig. 1

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ63C13S1	Carburetor assembly (engine with distributor ignition; NLA)	1	8	VE810	Control rod	1
—	LZ63C14S1	Carburetor assembly (engine with magneto ignition)	1	9	VF87	Sisson automatic choke, 6 volt (NLA)	1
2	LD242-1	Exhaust manifold	1	—	VF87A	Sisson automatic choke, 12 volt	1
3	LJ188-1	Support pipe	1	—	VF87B	Sisson automatic choke, 24 volt (NLA)	1
4	PD215	Locknut	1	10	YL353-31	Ignition wire	1
5	PK158	Clip	1	11	PE3	Lock washer, 1/4"	2
6	PK159	Clip	1	12	XA33	Screw, 1/4"-20 thread x 3/8" long	2
7	QD812	Gasket	1				

Installation And Servicing: Model VH4

INSTALLATION

When installing or reassembling the Sisson automatic choke on this model engine, the following instructions should be followed to obtain the proper travel for the opening and closing of the choke.

1. Mount *support pipe nipple* (3) to *exhaust outlet in manifold*, and tighten securely to position shown on diagram.
2. Mount *automatic choke* (5) to machined surface on *support pipe* (3) in position shown, with *screws* (7) and *lockwashers* (6).
3. Insert end of *control rod* (4) into *bushing* (2) and mount into hole in *carburetor choke lever*, with cotter pin hole outside and away from carburetor air horn. Assemble *cotter pin* (8).
4. The position of the *choke lever* on the *automatic choke* will vary for different engine models, so in all probability it will be necessary to relocate the lever for the VH4 engine.

First loosen *clamp screw* slightly on *automatic choke lever* and rotate lever to approximate *intermediate* starting position, as illustrated. The *clamp screw*, though loosened, should have enough tension on it so as to still rotate the choke lever shaft, as this is necessary in positioning the control rod and operating the automatic choke lever from the *intermediate* to the *closed* position. Pull up *control rod* (4) so that the *carburetor choke lever* is in the upper, *closed position*. Next, hook the other end of the *control rod* in the hole on the *automatic choke lever*, noting that the lever has to travel to the *closed position*. The *automatic choke lever* will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an *intermediate* or *starting position*, which will hold the carburetor choke lever partially open. This is the position of the *automatic choke lever* and *carburetor choke lever* on a cold engine. Tighten clamp screw on automatic choke lever.

When the starter switch is depressed, the lever on the automatic choke will jump from the *interme-*

diante to the *closed* position. When the starter switch is released and the engine starts, the lever will go back to the *intermediate* position and slowly to the open position as the engine warms up.

5. Assemble cotter pin (8) to control rod (4) at *automatic choke lever*. Connect ignition wire from starter side of starter switch, or solenoid switch to terminal on automatic choke. The automatic choke is to receive electrical current *only* when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

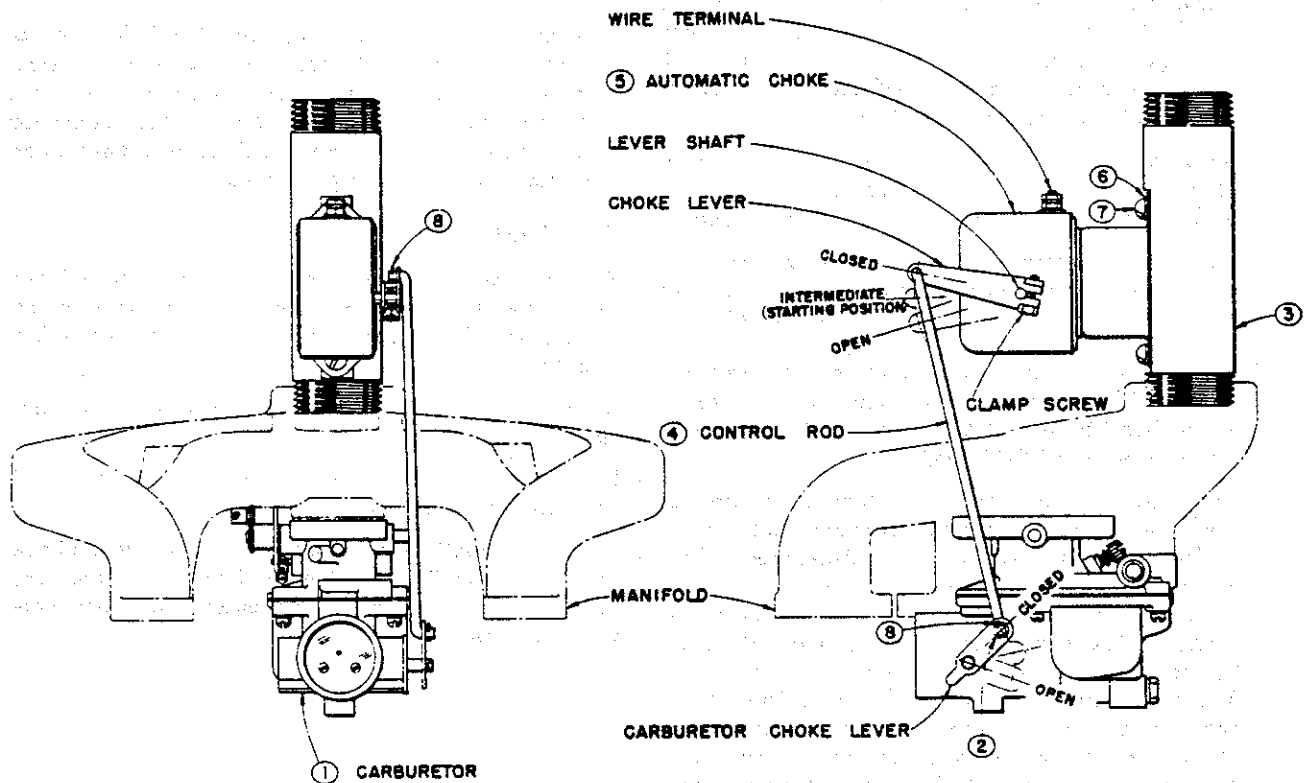
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana for listing of Sisson automatic choke service stations.

VF57, VF57A, VF57B, VF87A Automatic Choke

USE WITH MODEL VH4



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ63-3	Carburetor (NLA)	1	—	VF87AS1	Automatic choke, 12 volt, Pierce no. AC828	1
2	HF451	Bushing	1	—	VF57B	Automatic choke, 24 volt, Pierce no. AC914 (NLA)	1
3	LJ188-1	Support and exhaust pipe, 6" long	1	6	PE3	Lock washer, 1/4"	2
—	LJ175-1	Support and exhaust pipe, 8" long	1	7	XA33	Screw, 1/4"-20 thread x 3/8" long	2
4	VE694	Choke control rod	1	8	X11	Cotter pin, 1/16" diameter x 1/2" long	2
5	VF57A	Automatic choke, 6 volt, Pierce no. AC846 (NLA)	1				

Installation And Servicing: Model VG4D

INSTALLATION

When installing or reassembling the Sisson automatic choke on this model engine, the following instructions should be followed to obtain the proper travel for the opening and closing of the choke valve.

1. Mount *support pipe nipple* (2) to *exhaust outlet in manifold*, and tighten securely to position shown on diagram. Lock in place with *set screw* (8). It will be necessary to add a $\frac{1}{4}$ "-20 tap for set screw, if it is not included in present manifold.
2. Mount *automatic choke* (4) to pad on *support pipe* (2) in position shown, with lever underneath. Use *lockwashers* (6) and *screws* (7) for mounting choke.
3. Insert end of *control rod* (3) into hole in *carburetor choke lever*, with cotter pin hole outside and away from carburetor air horn. Assemble *cotter pin* (9).
4. The position of the *choke lever* on the *automatic choke* will vary for different engine models, so in all probability it will be necessary to reposition the lever for the VG4D engine.

First loosen *clamp screw* slightly on *automatic choke lever* and rotate lever to approximate *intermediate* starting position, as illustrated. The *clamp screw*, though loosened, should have enough tension on it so as to still rotate the choke lever shaft, as this is necessary in positioning the control rod and operating the automatic choke lever from the *intermediate* to the *closed* position. Pull outward on *control rod* (3) so that the *carburetor choke lever* is in the outer or *closed position*. Next, hook the other end of the *control rod* into the hole on the *automatic choke lever*, noting that the lever has to travel to the *closed position*. The *automatic choke lever* will be in a stopped position, or as far as it will go. When releasing your hold on the control rod, note that the automatic choke lever will snap back to an *intermediate* or *starting position*, which will hold the carburetor choke lever partially open. This is the normal position of the *automatic choke lever* and *carburetor choke lever* on a cold engine before starting. Tighten clamp screw on automatic choke lever.

When the starter switch is depressed, the lever on the automatic choke will jump from the *intermediate* to the *closed* position. When the starter switch is released and the engine starts, the lever will go back to the *intermediate* position and slowly to the open position as the engine warms up.

5. Assemble cotter pin (9) to control rod (3) at *automatic choke lever*. Connect *ignition wire* (5), from starter side of starter switch, or solenoid switch, to terminal on automatic choke. The automatic choke is to receive electrical current *only* when engine starter is being operated.

SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

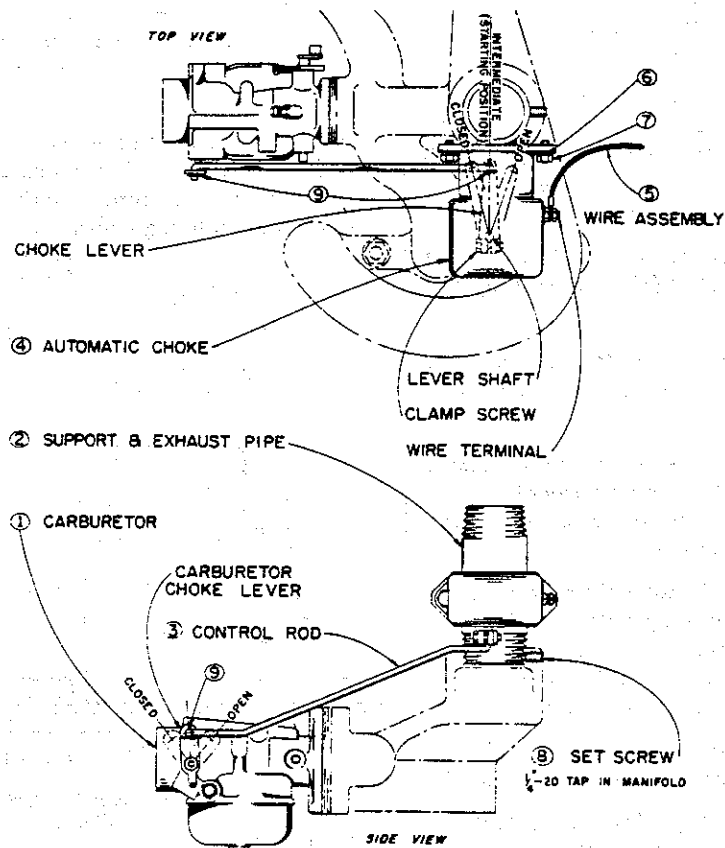
Do not lubricate automatic choke or any of the linkage.

If the choke is sticking due to an accumulation of oil and dust, wash in gasoline.

For adjustment or replacement of automatic choke parts, write to Pierce Governor Company, Anderson, Indiana, for listing of Sisson automatic choke service stations.

VF57, VF57A, VF57B, VF87A Automatic Choke

USE WITH MODEL VG4D



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ54J12	Carburetor (NLA)	1	—	VF57B	Automatic choke, 24 volt, Pierce no. AC914 (NLA)	1
2	LJ376A	Support and exhaust pipe, 4-1/2" long	1	5	YL222	Wire, 20-1/2" long (NLA)	1
—	LJ337A	Support and exhaust pipe, 9-1/4" long (NLA)	1	6	PE3	Lock washer, 1/4"	2
3	VE580	Choke control rod (NLA)	1	7	XD3	Screw, 1/4"-20 thread x 3/8" long	2
4	VF57A	Automatic choke, 6 volt, Pierce no. AC846 (NLA)	1	8	XE18	Set screw, 1/4"-20 thread x 1/2" long (NLA)	1
—	VF87AS1	Automatic choke, 12 volt, Pierce no. AC828	1	9	XI1	Cotter pin, 1/16" diameter x 1/2" long	2

Installation And Servicing: Model VG4D

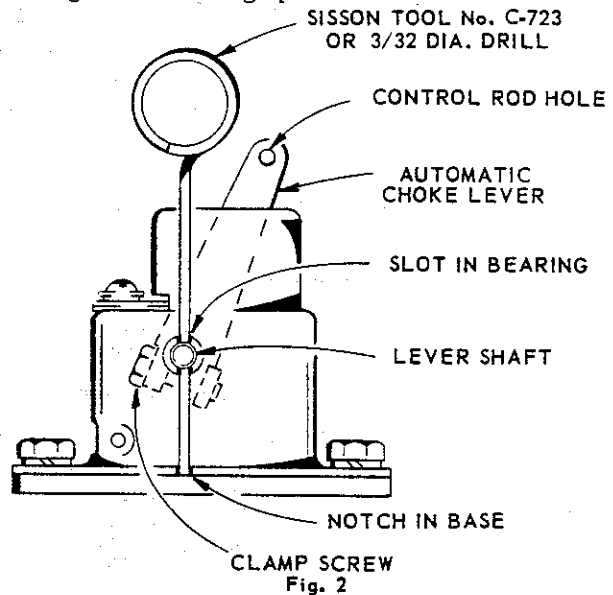
INSTALLATION

When installing or reassembling the automatic choke, the following instructions should be followed, to obtain the proper travel for opening and closing the carburetor choke valve. Refer to Fig's. 1 and 2.

1. Mount **support pipe** (2) to **exhaust outlet** in manifold, and tighten securely to position shown in Fig. 1. Lock in place with **set screw** (11). It will be necessary to add a $\frac{1}{4}$ "-20 tap for setscrew, if it is not included in present manifold.
2. Mount **automatic choke** (7) to machined surface on **support pipe** (2) with **gasket** (5), **screws** (10) and **lockwashers** (9).
3. Assemble end of **control rod** (6) to the inside of **carburetor choke lever** and secure in place with **retaining clip** (3).
4. The position of the **choke lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to re-position the lever for the VG4D engine.
 - a. With reference to Fig. 2; move **choke lever** until hole in **lever shaft** lines up with **slot in bearing**. Then insert **Sisson adjusting tool C-723** thru hole and down into **notch in base**. If tool is not available, use a 3/32 diameter drill.
 - b. Loosen **clamp screw** on automatic choke lever, just enough so lever can be turned on the shaft.
 - c. Pull up on **control rod** (6) Fig. 1, so that the **carburetor choke lever** is in the upper, or **closed position**. Retain rod in this position.
 - d. Rotate **automatic choke lever** until hole at end of lever lines up with bent end of control rod. (Rod pulled up in closed choke position). Mount control rod to lever by means of **retaining clip** (4).
 - e. Tighten **clamp screw** on lever and remove adjusting tool (or 3/32 drill).
5. **Note:** When removing adjusting tool or drill from lever shaft the automatic choke lever will spring back to an **intermediate** or **starting position**, which will hold the carburetor choke valve partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine.

When the starter switch is depressed, the lever on the automatic choke will jump from the *intermediate* to the *closed* position. When the starter switch is released and the engine starts, the lever will go back to the *intermediate* position and slowly to the *open* position as the engine warms up.

6. Connect **ignition wire** (8) from starter side of starter switch, or solenoid switch, to **terminal** on automatic choke. The automatic choke is to receive electrical current **only** when engine starting motor is being operated.



SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt that might cause this problem.

Do not lubricate automatic choke or any of its linkage. If the choke lever or choke valve is sticking due to an accumulation of oil or gum, wash with alcohol or carburetor cleaning fluid.

Check wire from starter switch to automatic choke to be sure the electrical circuit is completed. There must be a good contact between automatic choke and exhaust pipe to complete the ground circuit. Check for a complete circuit through the choke by holding a screw driver close to the magnet core while the starter is being operated. If there is a complete electrical circuit, the screw driver will be drawn against the magnet core.

VF62B Automatic Choke

USE WITH MODEL VG4D

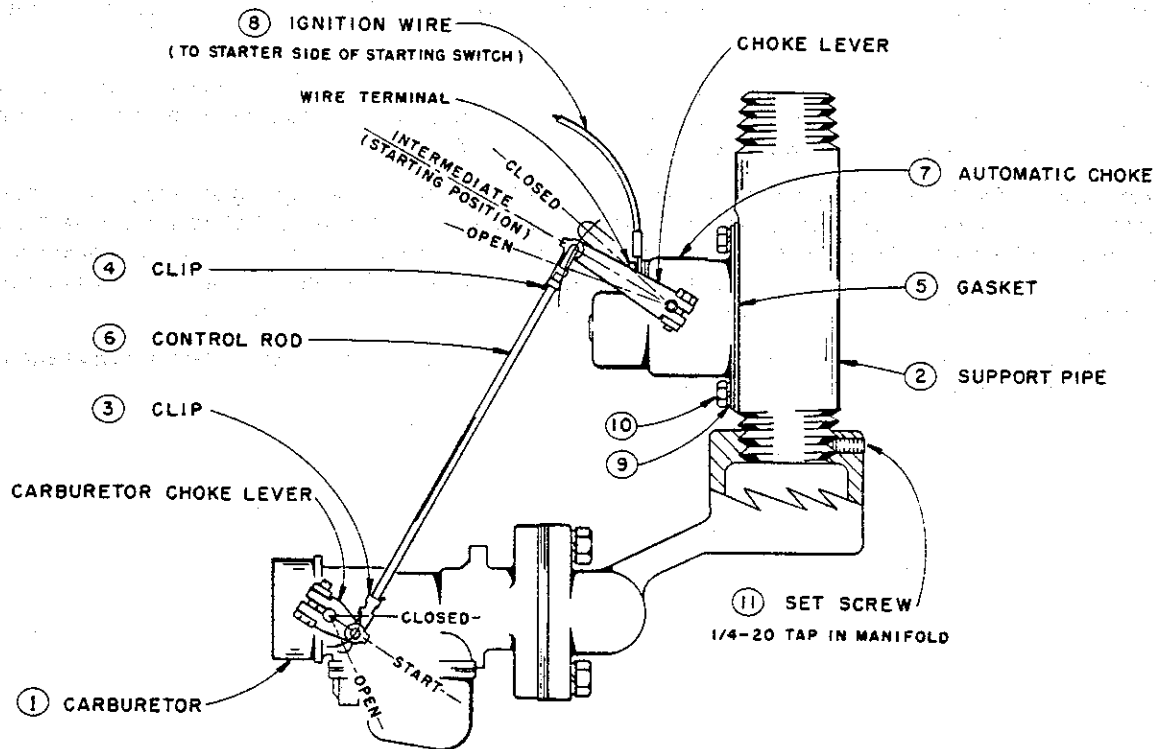


Fig. 1

NOTE: VF62B IS NOT AVAILABLE FOR SERVICE AS AN ENTIRE ASSEMBLY, HOWEVER, COMPONENT PARTS ARE AVAILABLE.

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	LZ57-4	Carburetor (replaces LZ54J12, VF57)	1	6	VE818	Control rod	1
2	LJ376A	Support and exhaust pipe, 5" long	1	7	VF87	Automatic choke, 6 volt (NLA) ...	1
—	LJ337B	Support and exhaust pipe, 9-1/4" long	1	—	VF87A	Automatic choke, 12 volt	1
3	PK158	Clip	1	8	YL353-31	Ignition wire	1
4	PK159	Clip	1	9	PE3	Lock washer, 1/4"	2
5	QD812	Gasket	1	10	XA33	Screw, 1/4"-20 thread x 3/8" long	2
				11	XE54	Set screw, 1/4"-20 thread x 7/16" long	1

Servicing: Models V461D, V465D

SERVICE

Replace complete cover and thermostat assembly if heating coils or thermostat spring become defective.

If choke housing or adapter are removed or replaced, apply **#242** or **#272 loctite** to their respective mounting screws in reassembly.

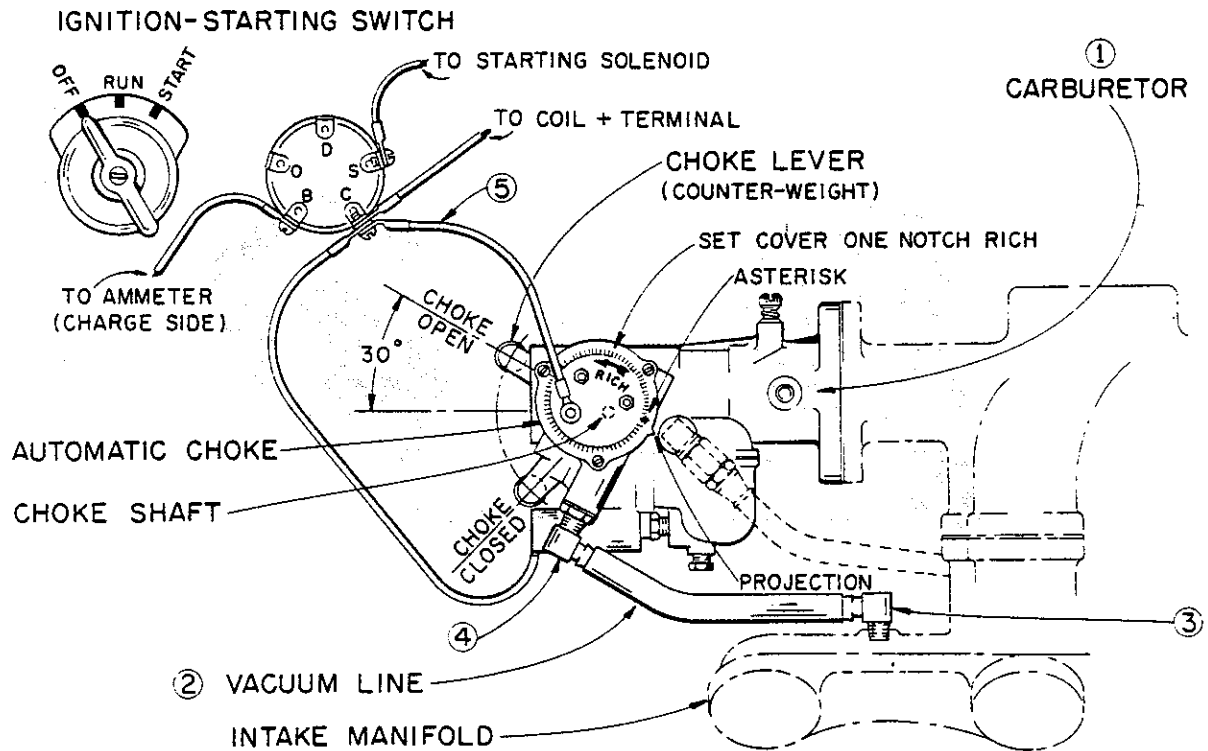
While cover is removed, disassemble vacuum piston from housing. Thoroughly clean cylinder walls and piston with acetone, alcohol or automatic choke spray cleaner. Blow out inside of housing with compressed air. *In reassembly; Do not use any type of lubricant on piston or in cylinder.*

Thermostat setting: When mounting cover assembly place loop of thermostat spring around pin on piston link so that the spring tension will tend to hold carburetor choke plate closed. *See illustration, page 2.* Rotate choke cover in the **rich direction** (counter-clockwise), until the **asterisk (*)** on cover lines up with **projection** on housing – then set cover **1 (one) mark rich** and tighten cover mounting screws. *See above illustration.* This rich setting is necessary so that the carburetor choke closes for all starts regardless of the temperature.

Connect ignition wire from choke cover to 'C' (coil), terminal on *ignition-starting switch*. Make sure that anti-diesel solenoid wire is securely tightened to the same terminal.

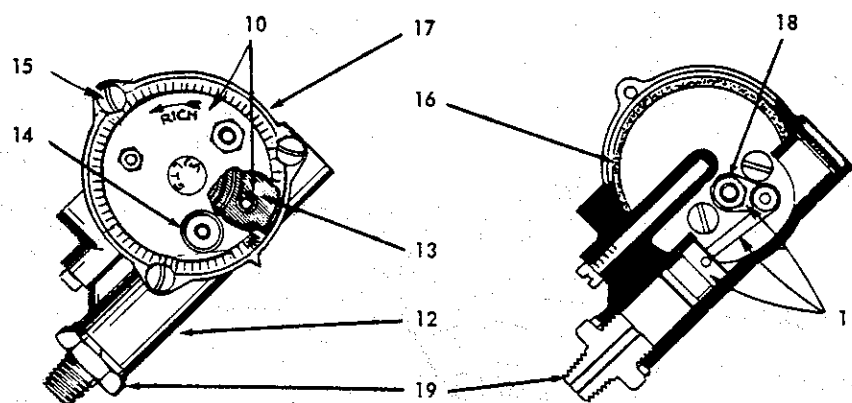
VF86 Automatic Choke Group

USE WITH MODELS V461D, V465D



ITEM	PART NO.	DESCRIPTION	QTY
1	LZ77H	Carburetor with automatic choke	1
2	LL178-7	Vacuum line	1
3	RF1439	Elbow	1
4	RF1493	Elbow	1
5	YL352-8	Wire assembly	1

Zenith No. C162-71 Automatic Choke (Optional)



ITEM	ZENITH PART NO.	DESCRIPTION	QTY
10	B165-44	Cover and thermostat assembly	1
11	C35-53	Vacuum piston and link assembly	1
12	C163-16A	Housing assembly	1
13	C44-6	Baffle plate	1
14	C47-4	Terminal nut, no. 6-32 thread	1
15	C140-12	Cover screw	3
16	C146-3	Cork insulating strip	1
17	C146-18	Cover gasket	1
18	T25S1	Nut, no. 10-32 thread	1
19	T200-19D	Fitting	1

Installation: Models S12D, S14D

INSTALLATION

When installing or reassembling the automatic choke, the following instructions should be followed, to obtain proper travel for opening and closing of the choke. *Refer to Fig's. 1 and 2.*

1. Screw **locknut** (4) on **support pipe** (3) and turn pipe tight into **exhaust manifold** (2), until mounting surface for automatic choke is in position shown in *Fig. 1*. Secure in place with **locknut** (4).
2. Mount **automatic choke** (9) to machined surface on **support pipe** (3) with **gasket** (7), **screws** (12) and **lock washer** (11).
3. Assemble end of **control rod** (8) to the inside of **carburetor choke lever** and secure in place with **retaining clip** (5).



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Installation And Servicing: Model VH4D

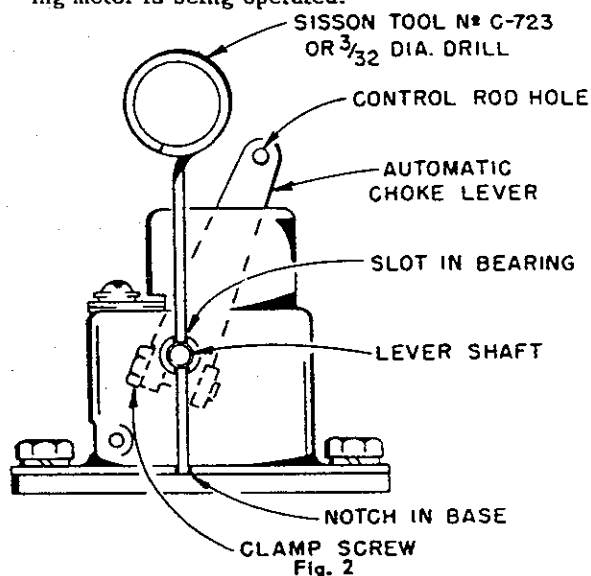
INSTALLATION

When installing or reassembling the automatic choke, the following instructions should be followed, to obtain proper travel for opening and closing of the choke. Refer to Fig's. 1 and 2.

1. Screw **locknut** (4) on **support pipe** (3) and turn pipe tight into **exhaust manifold** (2), until mounting surface for automatic choke is in position shown in Fig. 1. Secure in place with **locknut** (4).
2. Mount **automatic choke** (9) to machined surface on **support pipe** (3) with **gasket** (7), **screws** (12) and **lockwashers** (11).
3. Assemble end of **control rod** (8) to the inside of **carburetor choke lever** and secure in place with **retaining clip** (5).
4. The position of the **lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to re-position the lever for the THD engine.
 - a. With reference to Fig. 2; move **automatic choke lever** until hole in **lever shaft** lines up with **slot in bearing**. Then insert **Sisson adjusting tool C-723** thru hole and down into **notch in base**. If tool is not available, use a 3/32 diameter drill.
 - b. Loosen **clamp screw** on automatic choke lever, just enough so lever can be turned on the shaft.
 - c. Pull up on **control rod** (8) Fig. 1, so that the **carburetor choke lever** is in the upper, or **closed position**. Retain rod in this position.
 - d. Rotate **automatic choke lever** until hole at end of lever lines up with bent end of control rod. (Rod pulled up in closed choke position). Mount control rod to lever by means of **retaining clip** (6).
 - e. Tighten **clamp screw** on lever and remove adjusting tool (or 3/32 drill).
5. When removing adjusting tool from lever shaft, note that the automatic choke lever will spring back to an **intermediate** or **starting position**, which will hold the carburetor choke valve partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine.

When the starter switch is depressed, the lever on the automatic choke will jump from the **intermediate** to the **closed** position. When the starter switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

6. Connect **ignition wire** (10) from starter side of starter switch, or solenoid switch, to **terminal** on automatic choke. The automatic choke is to receive electrical current **only** when engine starting motor is being operated.



SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

Do not lubricate automatic choke or any of the linkage.

If the choke lever or choke valve is sticking due to an accumulation of oil or gum, wash with alcohol or carburetor cleaning fluid.

Check wire from starter switch to automatic choke to be sure the electrical circuit is completed. There must be a good contact between automatic choke and exhaust pipe to complete the ground circuit. Check for a complete circuit through the choke by holding a screw driver close to the magnet core while the starter is being operated. If there is an electrical circuit, the screw driver will be drawn against the magnet core.

VF98 Automatic Choke Set-Up

USE WITH MODEL VH4D

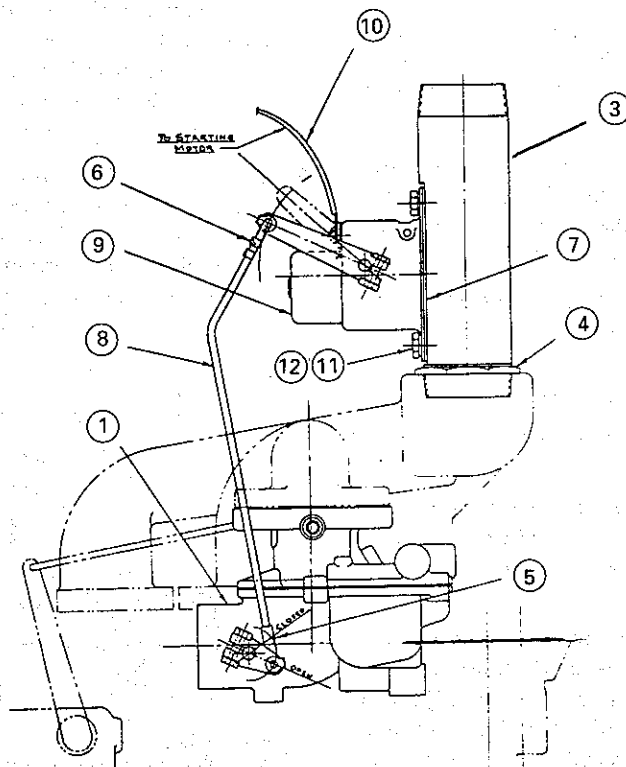


Fig. 1

ITEM	PART NO.	DESCRIPTION	QTY
1	LZ63-10	Carburetor assembly	1
3	LJ188-1	Support pipe	1
4	PD215	Locknut	1
5	PK158	Clip	1
6	PK159	Clip	1
7	QD812	Gasket	1
8	VE8B	Control rod	1
9	VF87A	Sisson automatic choke, 12 volt	1
10	YL353-27	Ignition wire	1
11	PE3	Lock washer, 1/4"	2
12	XA33	Screw, 1/4"-20 thread x 3/8" long	2

Installation And Servicing: Model W4-1770

INSTALLATION

When installing or reassembling the automatic choke, the following instructions should be followed, to obtain proper travel for opening and closing of the choke. Refer to Fig's. 1 and 2.

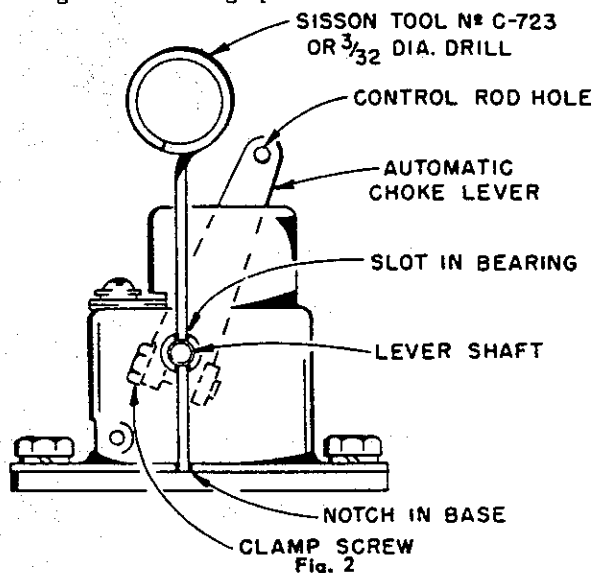
1. Screw **locknut** (4) on **support pipe** (3) and turn pipe tight into **exhaust manifold** (2), until mounting surface for automatic choke is in position shown in Fig. 1. Secure in place with **locknut** (4).
2. Mount **automatic choke** (9) to machined surface on **support pipe** (3) with **gasket** (7), **screws** (12) and **lockwashers** (11).
3. Assemble end of **control rod** (8) to the inside of **carburetor choke lever** and secure in place with **retaining clip** (5).
4. The position of the **lever** on the **automatic choke** will vary for different engine models, so in all probability it will be necessary to re-position the lever for the THD engine.
 - a. With reference to Fig. 2; move **automatic choke lever** until hole in **lever shaft** lines up with **slot in bearing**. Then insert **Sisson adjusting tool C-723** thru hole and down into **notch in base**. If tool is not available, use a $\frac{3}{32}$ diameter drill.
 - b. Loosen **clamp screw** on automatic choke lever, just enough so lever can be turned on the shaft.
 - c. Pull up on **control rod** (8) Fig. 1, so that the **carburetor choke lever** is in the upper, or **closed position**. Retain rod in this position.
 - d. Rotate **automatic choke lever** until hole at end of lever lines up with bent end of control rod. (Rod pulled up in closed choke position). Mount control rod to lever by means of **retaining clip** (5).
 - e. Tighten **clamp screw** on lever and remove adjusting tool (or $\frac{3}{32}$ drill).

5. When removing adjusting tool from lever shaft, note that the automatic choke lever will spring back to an **intermediate** or **starting position**, which will hold the carburetor choke valve partially open. This is the position of the **automatic choke lever** and **carburetor choke lever** on a cold engine.

When the starter switch is depressed, the lever on the automatic choke will jump from the **interme-**

diate to the **closed** position. When the starter switch is released and the engine starts, the lever will go back to the **intermediate** position and slowly to the **open** position as the engine warms up.

6. Connect **ignition wire** (10) from starter side of starter switch, or solenoid switch, to **terminal** on automatic choke. The automatic choke is to receive electrical current **only** when engine starting motor is being operated.



SERVICING

Be sure that control rod from automatic choke lever to carburetor choke lever is not binding. Remove any paint or dirt from external parts that might cause this trouble.

Do not lubricate automatic choke or any of the linkage.

If the choke lever or choke valve is sticking due to an accumulation of oil or gum, wash with alcohol or carburetor cleaning fluid.

Check wire from starter switch to automatic choke to be sure the electrical circuit is completed. There must be a good contact between automatic choke and exhaust pipe to complete the ground circuit. Check for a complete circuit through the choke by holding a screw driver close to the magnet core while the starter is being operated. If there is an electrical circuit, the screw driver will be drawn against the magnet core.

VF101 Automatic Choke Set-Up

USE WITH MODEL W4-1770

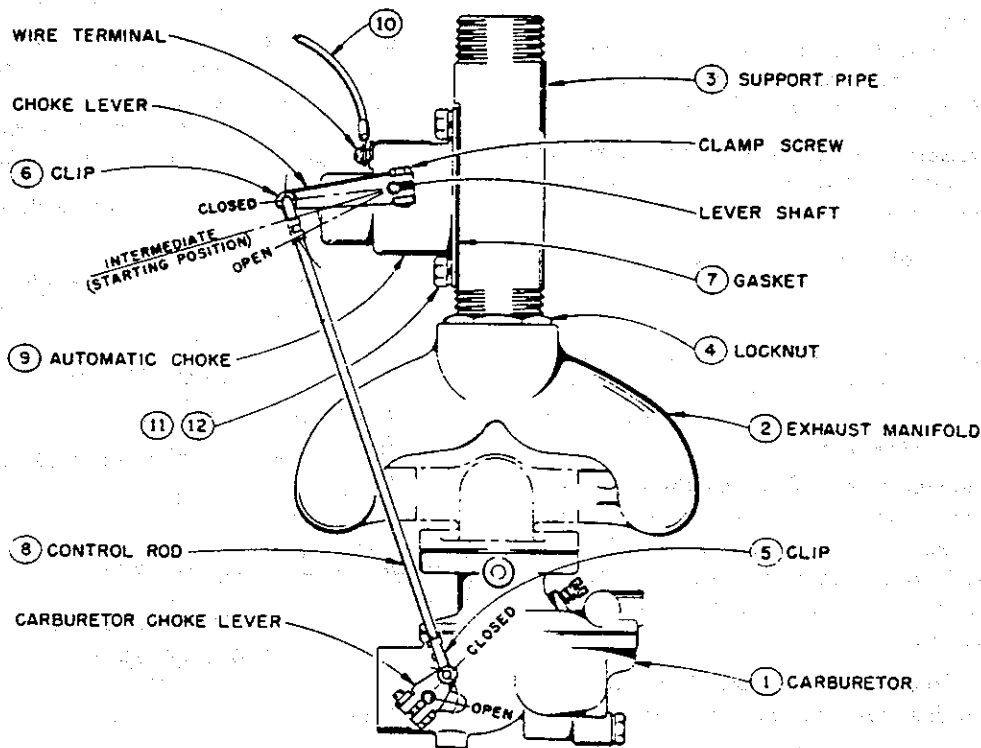


Fig. 1

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	L57M4	Carburetor assembly	1	9	VF87A	Sisson automatic choke, 12 volt	1
2	* — — —	Exhaust manifold	1	10	YL352-30	Ignition wire	1
3	LJ188-1	Support pipe	1	11	PE3	Lock washer, 1/4"	2
4	PD215	Locknut	1	12	XA33	Screw, 1/4"-20 thread x 3/8" long	2
5	PK158	Clip	1				
6	PK159	Clip	1				
7	QD812	Gasket	1				
8	VE818	Control rod	1				

* Not serviced separately.