



Service Bulletin

Ariens Company
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Product Family: Ariens and Gravely 915- and 991-Series Mowers

Subject: Kohler KT Smart Choke™ Engines Hard Starting / Rich Running

Dealer Action: Inspect and Repair if Necessary

Model	Serial Number	Description
915159	000101 – 999999	Ariens Zoom 42
915161		Ariens Zoom 50
915163		Ariens Zoom XL 42
915165		Ariens Zoom XL 48
915173		Ariens Zoom XL 54
915175		Ariens IKON-X 42
915177		Ariens IKON-X 52
991085		Ariens Max Zoom 48
991086		Ariens Max Zoom 52
991087		Ariens Max Zoom 60

Model	Serial Number	Description
915172	000101 – 999999	Gravely ZT-X 42
915174		Gravely ZT-X 50
915178		Gravely ZT 42
915180		Gravely ZT 50
915184		Gravely ZT XL 42
915186		Gravely ZT XL 48
915188		Gravely ZT XL 54
991107		Gravely ZT HD 44
991108		Gravely ZT HD 48
991109		Gravely ZT HD 52
991110		Gravely ZT HD 60

Ariens Company has been notified by Kohler Engine Corp. that model KT series engines with Smart Choke may experience rich running or hard starting conditions. If this occurs, refer to the attached bulletin #337 from Kohler (see pages 2 – 3).

Dealers are to follow these instructions and file a warranty claim directly with Kohler for any affected units.

Please direct any questions or concerns regarding this bulletin to your Kohler Distributor.

NO.		337
MODEL		KT Series with Smart-Choke™
DATE ISSUED	DATE REVISED	
3/15	4/15	

KT Series Smart-Choke™ Rich Running/Hard Starting Conditions

There have been reports of hard starting involving Smart-Choke™ equipped units. The reports include rich running (blubbering) and the inability to increase RPM speed above idle.

The system is designed to utilize both the air vane and thermostat to control the choke plate position. As the engine starts, the air vane opens the choke plate approximately 2/3 and is further opened by the thermostat as the engine continues to warm-up. In some situations, too low a governed idle speed, attributed in part by parasitic load of the application, can affect choke performance after starting.

If a problem is encountered, the following should be performed based on starting mode and the conditions encountered. **DO NOT ATTEMPT TO RESET OR ADJUST THERMOSTAT SETTING.**

NOTE: The blower housing MUST BE INSTALLED for proper operation and all testing.

A) WHEN STARTING AT LOW SPEED (Throttle Position)

- Engine Starts “Rich”, (blubbers), DOES NOT “clean-out” and continues to run “Rich”:
 - 1) Start unit at “FULL” throttle.
 - 2) Run unit for 5 minutes to fully warm up and clean out excess fuel.
 - 3) Recheck the GOVERNED IDLE SPEED and if necessary reset to 1750-1800 RPM. (See Figure 1.)
 - 4) Restart and recheck operation.

NOTE: Engine and thermostat must be allowed to cool to room temperature before restart and recheck is performed.
- If condition persists after idle speed is confirmed:
 - 5) Check that no physical binding of linkage or the choke exists.
 - 6) Remove blower housing and check air vane assembly for binding.
 - 7) Check that air vane base is fully seated into boss on intake manifold. If needed remove mounting screw and seat vane assembly into manifold. Install screw being careful not to over tighten. Screw torque spec. is 1 N·m (9 in. lb.).
 - 8) Reinstall blower housing, restart, and recheck operation.

NOTE: Engine and thermostat must be allowed to cool to room temperature before restart and recheck is performed.

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Routing	Service Manager	Sales Manager	Parts Manager	Chief Mechanic	Mechanic No. 1	Mechanic No. 2	Mechanic No. 3	Mechanic No. 4	Return This To
Initial Here									

B) WHEN STARTING AT HIGH SPEED (Throttle Position)

- Engine Starts “Rich”, (blubbers):
 - 1) Check that no physical binding of linkage or the choke exists.
 - 2) If no binding is found, replace the Choke Unloader Link with Part Number 32 079 08-S *(See NOTE below).
 - 3) Restart and recheck operation.

NOTE: Engine and thermostat must be allowed to cool to room temperature before restart and recheck is performed.

*NOTE: The 32 079 08-S choke link is identified by a “Green” paint mark and is slightly (0.067”) shorter. Implemented as running change and is already contained on many units. (See Figure 2.)

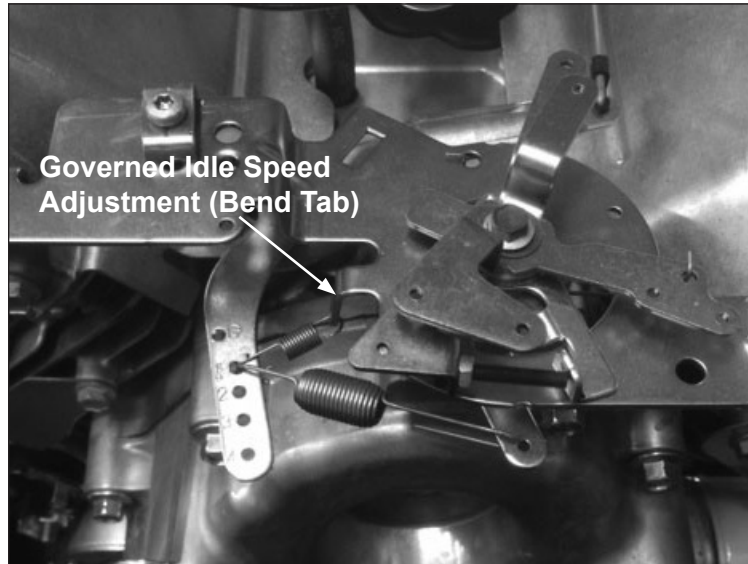


Figure 1. Governed Idle Speed Adjustment.

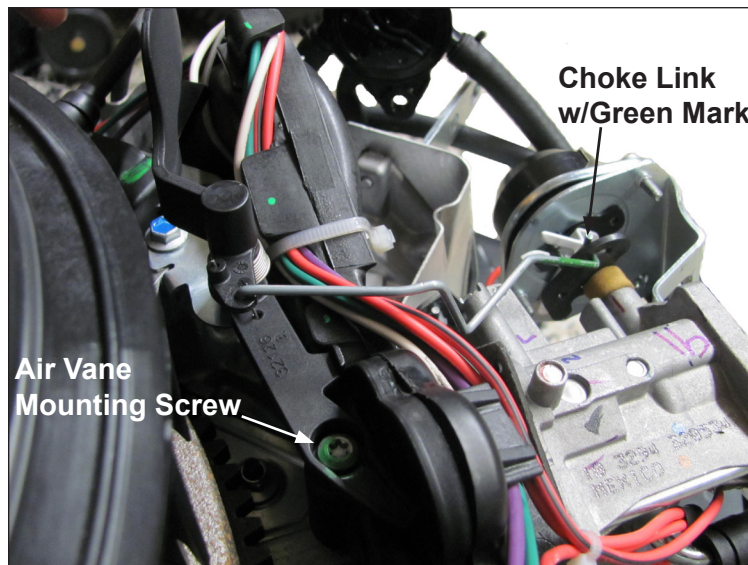


Figure 2. Choke Link 32 079 08-S and Air Vane Detail. (Air Cleaner Assembly Removed for Clarity.)