California Environmental Protection Agency AIR RESOURCES BOARD	LONCIN INDUSTRIAL CO., LTD.	EXECUTIVE ORDER U-U-145-0013-1 New Off-Road Small Spark-Ignition Engines at or Below 19 Kilowatts

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapters 1 and 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following engine and emission control systems produced by the manufacturer are certified for use in small off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (cc)	ENGINE CLASS	FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)
2009	9CGPS.2702GC	242, 270	4-stroke, ≥225 cc	Gasoline

DURABILITY HOURS	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
250	TWC	Compressor, Pump, Generator Set, Pressure Washer, Snowblower, Edger

ENGINE CODES/MODELS (rated power in kilowatt, kW)	LC177F, LC177FD [Each 5.1 kW], LC173F, LC173FD [Each 4.8 kW] ; DW177F-H, DW177F-E, DW177FD-H, DW177FD-E, DW177FD-F [Each 5.1 kW]; G270F, G270FD [Each 5.1 kW], G240F, G240FD [Each 4.8 kW], HY270F (5.1 kW)

ABBREVIATIONS: EM=engine modification TWC/OC=three-way/oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SFI=sequential MFI TBI=throttle body fuel injection DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2(prefix)=parallel (2)(suffix)=in series ECM=engine control module

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx), carbon monoxide (CO), and particulate matter (PM) emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2403(b)), and certification emission levels for this engine family in grams per kilowatt-hour (g/kW-hr). Engines within this engine family shall have closed crankcases in conformance with Section 90.109 of the "California Exhaust Emission Standards and Test Procedures for 2005 and Later Small Off-Road Engines," adopted July 26, 2004.

*=not applicable	HC+NOx (g/kW-hr)	CO (g/kW-hr)	PM (g/kW-hr)
STANDARD	8.0	549	*
FAMILY EMISSION LEVEL	*	*	*
CERTIFICATION LEVEL	6.4	194	*

BE IT FURTHER RESOLVED: That the family emission level(s) (FELs), as applicable, is an emission limit declared by the manufacturer for use in the averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2403(e)(1) and 2407(a).

BE IT FURTHER RESOLVED: That for the listed engines, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2404 (emission control labels) and 13 CCR Sections 2405 and 2406 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Quarterly reports of engines produced in this engine family for sale in California shall be submitted to the Executive Officer no later than 45 days after the end of each calendar quarter.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

This Executive Order hereby supersedes Executive Order U-U-145-0013 dated December 19, 2008.

Executed at El Monte, California on this 17 day of February 2009.

Annette Hebert, Chief
Mobile Source Operations Division

California Environmental Protection Agency AIR RESOURCES BOARD	LONCIN INDUSTRIAL CO., LTD.	EXECUTIVE ORDER U-U-145-0016-1 New Off-Road Small Spark-Ignition Equipment

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapters 1 and 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following equipment produced by the manufacturer is certified as described below. Production equipment shall be in all material respects the same as those for which certification is granted.

ENGINE DESCRIPTION			
MANUFACTURER	**ENGINE FAMILY (E.O. NUMBER)**	**ENGINE SIZE (cc)**	**FUEL TYPE** (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)
LONCIN INDUSTRIAL CO., LTD.	9CGPS.1631GC (U-U-145-0011)	163	Gasoline

S.A. = See Attachment
TBC = To Be Certified

EQUIPMENT DESCRIPTION			
MODEL YEAR	**EVAPORATIVE FAMILY**	**FUEL TANK SIZE (liters)**	**EQUIPMENT APPLICATION**
2009	CM9CGPS.1631GC	3.4, 3.6, 15, 18	Compressor, Pump, Generator Set, Snowblower, Pressure Washer, Edger

EMISSION CONTROL SYSTEMS (ECS)	ENGINE and/or EQUIPMENT MODEL
Canister/Metal	LC168F-1, LC168FD-1, G160F, G160FD, HY160F, BD168F-1H, BD168F-1L

A. **ECS TYPE** (Venting Control Type/Tank Barrier Type): 1. **Venting Control Type and Code**:- Canister=C Sealed Tank=S Other=O 2. **Tank Barrier Type and Code**:- Metal=M Treated HDPE or PE=P Co-extruded=C Selar=L Nylon=N Acetal=A Other=O B. **EVAPORATIVE FAMILY 2-Letter CODE** (Venting Control Codes =C, S, O); (Tank Barrier Codes = M, P, C, L, N, A, O). **Note**: Always list venting control type or code first before tank barrier type or code. Do not use abbreviations for ECS types.

The following are the evaporative emission standards (Title 13, California Code of Regulations, 13 CCR Section 2754(a) or 2754(b), as applicable), and certification levels in grams per day (g/day) or grams per square meter per day (g/m^2/day) or grams per liter (g/l) for this evaporative family or the component Executive Order, as applicable. The running loss emissions control has been demonstrated by the manufacturer.

*=not applicable	DESIGN BASED					
FUEL HOSE PERMEATION (grams ROG/m^2/day)		**FUEL TANK PERMEATION** (grams ROG/m^2/day)		**CARBON CANISTER BUTANE WORKING CAPACITY** (grams HC/liter)	
STANDARD	**CERTIFICATION LEVEL OR EXECUTIVE ORDER**	**STANDARD**	**CERTIFICATION LEVEL OR EXECUTIVE ORDER**	**STANDARD**	**CERTIFICATION LEVEL OR EXECUTIVE ORDER**
15	C-U-05-012, Q-08-005	2.5	*	1.0, 1.4	C-U-06-003, C-U-06-007 C-U-07-008, C-U-07-009

BE IT FURTHER RESOLVED: That for the listed equipment, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2759 (labeling) and 13 CCR Sections 2760 and 2764 (emission control system warranty).

Equipment certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Equipment in this family that is produced for any other model-year is not covered by this Executive Order.

This Executive Order hereby supersedes Executive Order U-U-145-0016 dated December 19, 2008.

Executed at El Monte, California on this 17 day of February 2009.

Annette Hebert, Chief
Mobile Source Operations Division