Onan

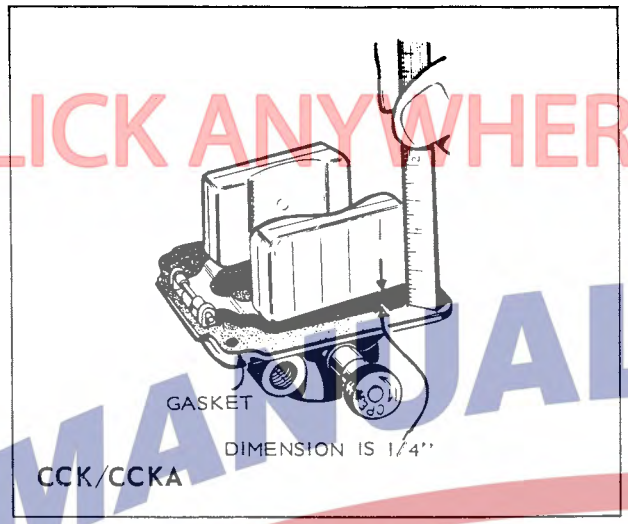
Service Manual

CCKA Series

Industrial Engines

Service® Manual

ON-S-CCKA



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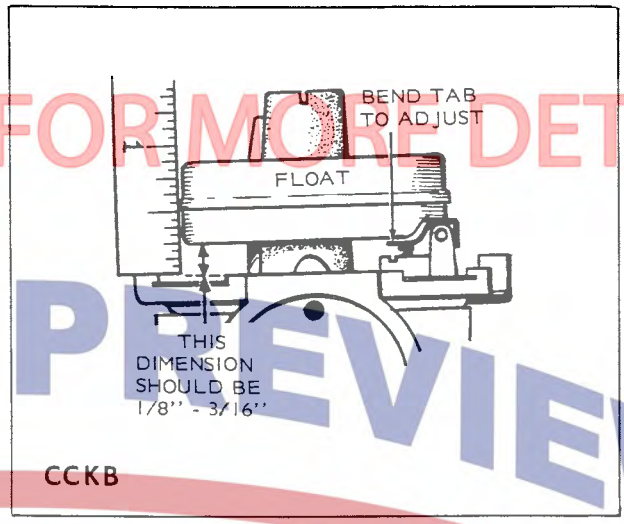

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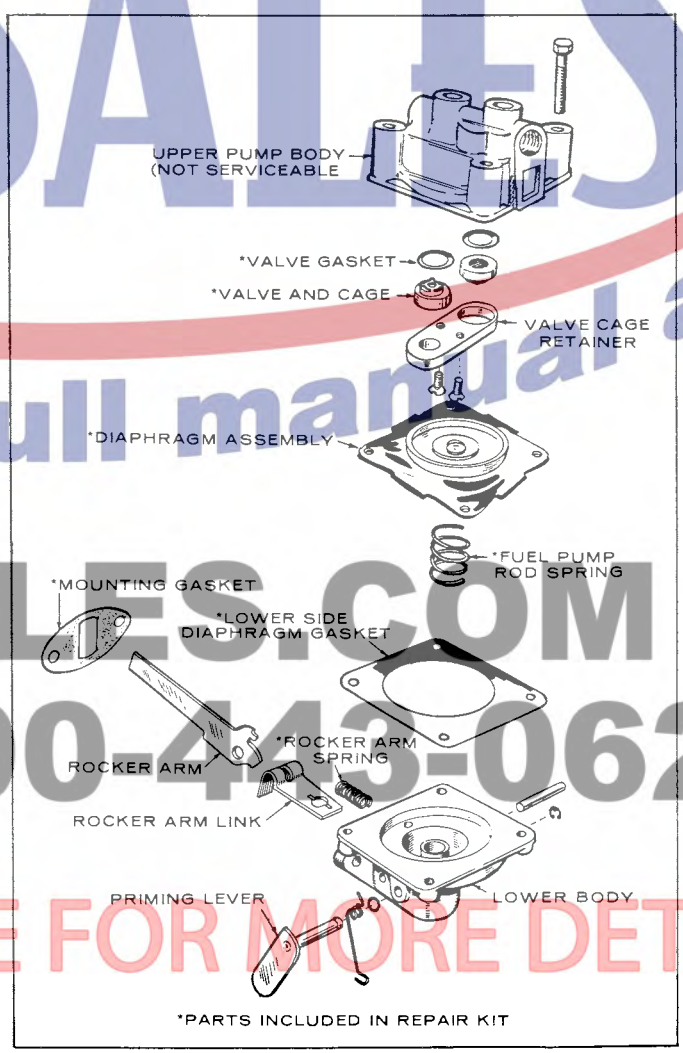
Float Level Adjustments

The float level is a critical adjustment and is necessary to accurately set the float level thereby obtaining correct and satisfactory engine performance. Gasket to float dimension should be as indicated.



*PARTS INCLUDED IN REPAIR KIT

Fuel Pump

Diaphragm fuel pumps are standard on all Onan gasoline engines. If fuel is not reaching the carburetor, check the fuel pump. Pump failure is usually due to a leaking diaphragm, valve, or valve gasket, a weak or broken spring, or wear in the drive linkage. Repair the pump or install a new one. A fuel pump repair kit is available for all CCK Series engines.

ONAN INDUSTRIAL ENGINES

CCK
CCKA

SERIES

TABLE OF CONTENTS

IMPORTANT . . . RETURN WARRANTY CARD ATTACHED TO ENGINE.

it may be necessary to move the air cleaner off the engine and use a longer connection hose. For extreme dust or dirt conditions, install a special heavy duty air cleaner.

FUEL SYSTEM

Engines use a diaphragm fuel pump. The fuel pump has a 1/8-inch pipe thread inlet, fitted with a 1/4-inch inverted flare tube fitting. If a solid wall is used, form a loop in the line (or install a section of flexible fuel hose) to absorb vibration. If a line with a pipe thread end is used, remove the flare type fitting from the fuel pump inlet.

Fuel supply tanks may be installed in any safe, convenient location. If the tank is installed within the engine enclosure, provide a vent line to the outside. The fuel tank top should be approximately 6 inches below the carburetor, but not more than four feet below the fuel pump.

Installing a fuel filter between the fuel tank and the fuel pump is recommended. It should be fitted with a shut-off valve and be easily accessible for cleaning.

CONNECTING TO THE LOAD

Dimensions of various power take-off shafts are as follows:

SHAFT	DIAMETER	LENGTH	KEY SIZE
Standard	1-1/2	2-3/4	3/8
Rockford Clutch	1-7/16	3-1/2	3/8
Gear Reduction	1-1/4	2-3/4	1/4

Belt Drive: V-belts are preferable to flat belts. Consult a reliable belting supplier for recommendations regarding size of pulleys, number of belts, etc., required. A typical belt drive installation is shown in Figure 1.

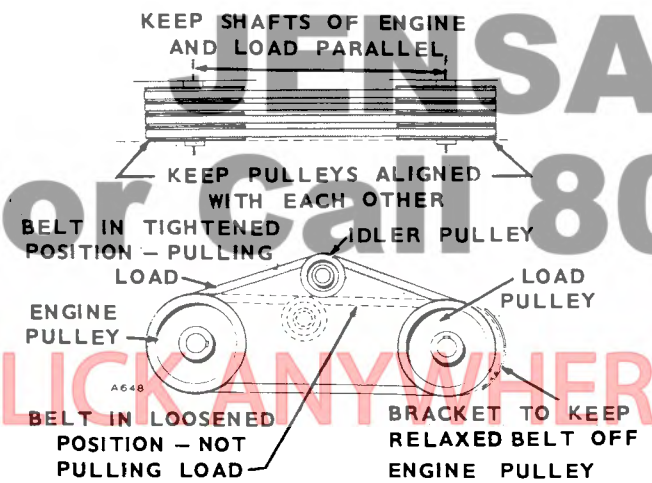


FIGURE 1. BELT DRIVE

Comply with the following installation requirements:

1. The shafts of the engine and the load must be parallel with each other.
2. Align the engine and load pulleys.
3. Mount the engine pulley as close to the engine as possible.
4. If the installation permits, belts should run horizontally.
5. Some method of disconnecting the load for starting is recommended. If a clutch is not used, a belt tightener idler arrangement can be used.

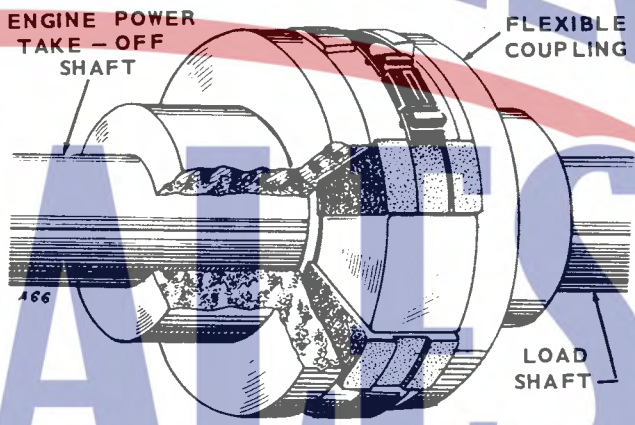


FIGURE 2. FLEXIBLE COUPLING

Flexible Coupling: If a flexible engine-to-load drive coupling is used, the load shaft must be in line and centered with the engine shaft (Figure 2).

Reduction Gear Drive: Reduction gear drives are mounted at the factory (when ordered). The method of connecting the load is the same as when connecting directly to the engine shaft.

Clutch Installation: Rockford clutches can be installed at the factory or in the field. Install the clutch according to the following instructions (Figure 3).

Provide room for the clutch adapter casting by discarding the air housing clip and plugging the wet hole into the #2 valve compartment with a 3/8-16 x 1/2-inch slotted headless set screw. Apply sealing compound to the threads and install screw flush with the cylinder block.

Drill a 13/64-inch hole (or filed slot) in the crankshaft for clutch set screw. Locate center of hole 11/32-inch from the end and directly opposite the keyway in the crankshaft.

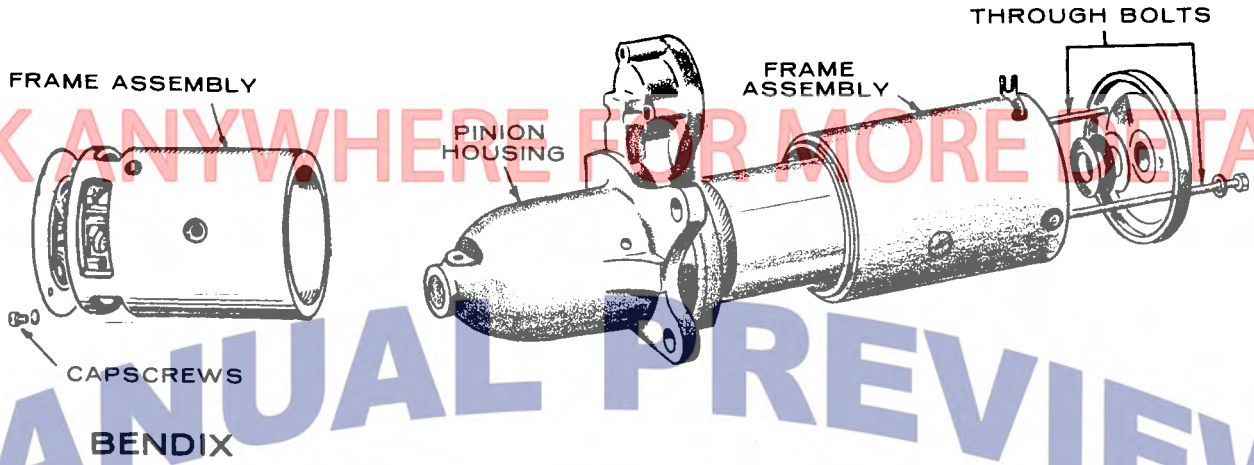


FIGURE 35. STARTER DISASSEMBLY

4. **Solenoid Starter Only:** The armature can now be removed from the front bracket. Be careful not to miss the small steel washer used in the end of the armature shaft. Remove the shift lever at the same time the armature is removed. The spring holder, lever springs and retainer can be removed prior to the lever (Figure 36).

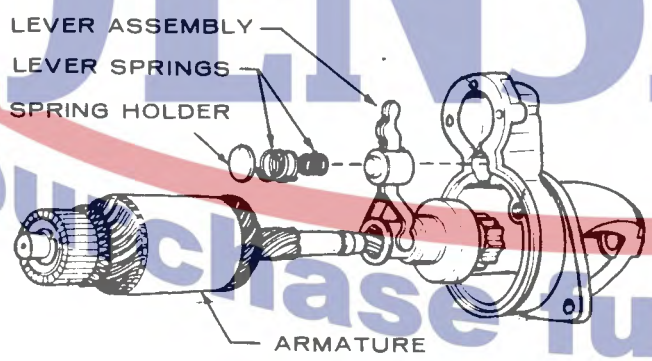


FIGURE 36. REMOVING ARMATURE FROM SOLENOID SHIFT STARTER

5. **Solenoid Starter Only:** Remove the ring after driving the pinion stopper toward the pinion gear using a cylindrical tool (Figure 37). Remove the overrunning clutch and the pinion stopper at the same time.
6. **Bendix Starter Only:** The entire assembly is mounted on the armature shaft. When disassembling the bendix starter, pay particular attention to the various parts and their positioning in the starter assembly (Figure 38). If the gears of the bendix pinion are damaged, replace the entire pinion. Inspect the screw shaft for rust and burrs.
7. Remove the brushes from the brushholder and inspect them (inspection of brushes and brush springs discussed later).
8. Remove the pole shoes if necessary by removing the flathead machine screws which anchor them to the frame.

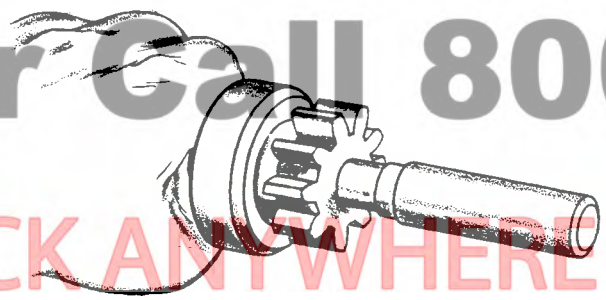


FIGURE 37. TOOL FOR DRIVING PINION STOPPER

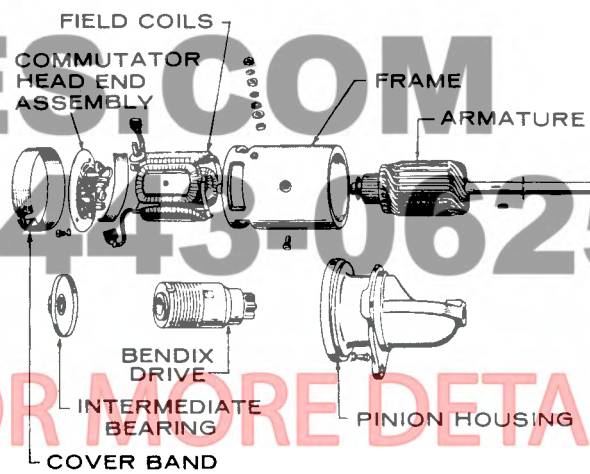
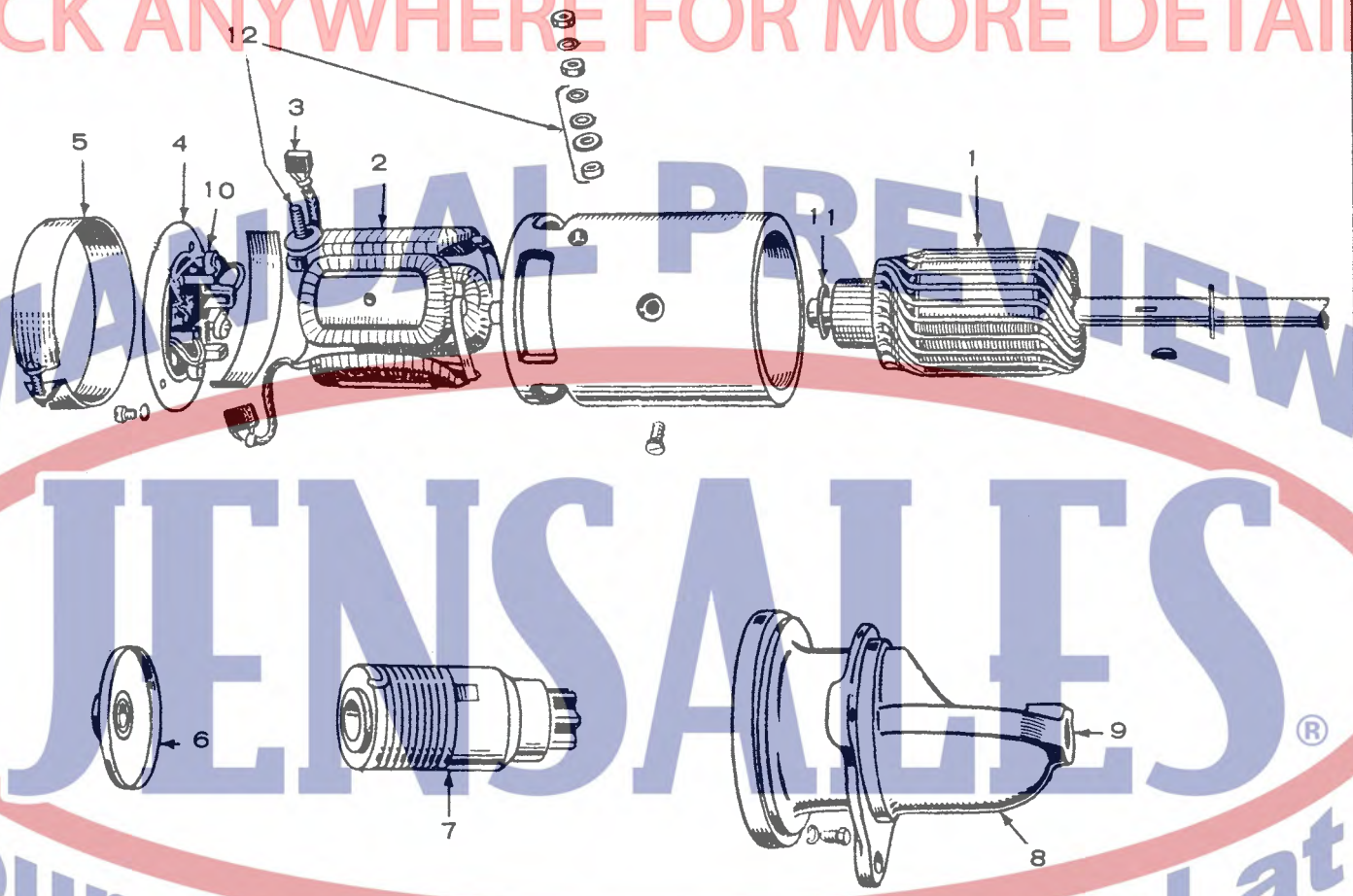


FIGURE 38. BENDIX STARTER



STARTER MOTOR PARTS GROUP

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	MOTOR ASSEMBLY, STARTING		
			6 Volt
	191-0198	1	Spec A through F
	191-0526	1	Begin Spec G
			12 Volt
	191-0150	1	Spec A through F
	191-0511	1	Begin Spec G (Optional Spec J)
	191-1052	1	Begin Spec J
1	ARMATURE		
	(P)16-47	1	6 Volt
	191-0517	1	12 Volt
2	COIL ASSEMBLY PACKAGE, FIELD		
	(P)20-42	1	6 Volt
	191-1017	1	12 Volt
3	BRUSH SET, SERVICE		
	(P)17-33	1	6 Volt
	191-0513	1	12 Volt
4	HEAD ASSEMBLY, COMMUTATOR END		
	(P)19-28	1	6 Volt
	191-1018	1	12 Volt
6	191-1019	1	Bearing Assembly, Intermediate
7	191-0271	1	Drive Assembly, Bendix
9	191-0735	1	Bearing, Drive End
10	191-1020	1	Spring, Brush (Set of 4)
11	191-1021	1	Washer Armature Thrust (Package)
12	191-1022	1	Stud, Terminal (Package)

NOTE: Order Prestolite Parts (P) from your nearest Prestolite Dealer, giving part number, full description and Starter Motor number.

WIRING DIAGRAMS

The wiring diagrams on the following pages are typical and apply only to standard CCK series engines. Wiring diagrams for special models are available on request from the factory; send engine model, spec, and serial numbers with the request.