

# Onan

## Parts Manual

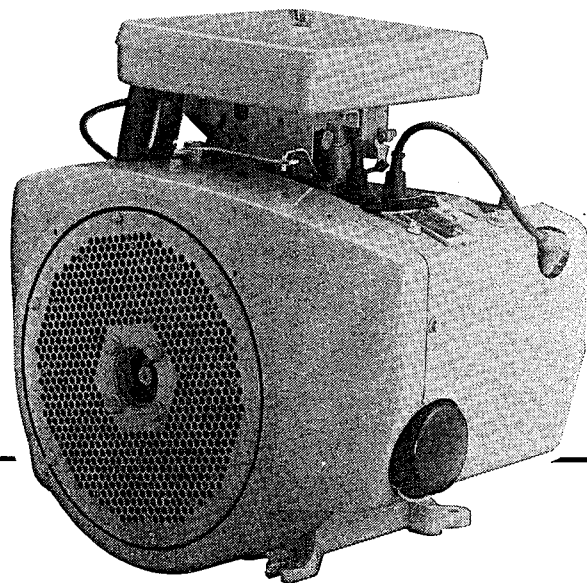
Performer

P216G

P218G

P220G

**Engine**



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965-0263  
5-91 (SPEC A-D)  
Replaces 11-89 (SPEC A-C)  
Printed in U.S.A.

## SAFETY PRECAUTIONS

The following symbols are used in Onan manuals to alert users to the potentially dangerous conditions relating to maintenance of the equipment and replacement of parts. Please read and observe.



***This symbol warns of immediate hazards which will result in severe personal injury or death.***



***This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.***



***This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.***

## MODEL IDENTIFICATION

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO., and SERIAL NO. from the Onan nameplate.

For handy reference, insert your nameplate information in the spaces below:

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MODEL AND SPEC NO.

---

SERIAL NO.

## PRODUCT SAFETY PRECAUTIONS

### **▲WARNING**

***Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.***

### **▲WARNING**

***Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!***

### **▲WARNING**

***Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives, or using solvents take all necessary precautions not to ingest, breathe the fumes, or contact the liquids. Use adequate ventilation and wear protective gloves, masks and clothing!***

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## Introduction

This Catalog applies to the Performer Engine. Parts are arranged in Groups of related items. Each Illustrated Part is identified by a reference number corresponding to the same reference number in the parts list for that illustration. Parts illustrations are typical. Using the MODEL and SPEC No. from the nameplate, select parts that apply to your engine. The SALES OPTION CODES listed for your SPEC will determine the difference in the parts. Right and Left sides are determined by facing the Flywheel end (FRONT) of the Engine.

## Engine Data Table

MODEL	RATING
P216G-I/*	16 Horse Power
P218G-I/*	18 Horse Power
P220G-I/*	20 Horse Power

\* - The specification number denotes customer requested options or deviations from a standard (1A, 1B, etc.) model. The specification letter advances (A, to B, to C, etc.) with major manufacturing changes.

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### Sales Option Code Table

SPEC NO.	10461	10462	10463	10464	10478	10482	10488	10498	10501	10502	10509	10518	10528
SALES OPTION CODE NUMBERS	11AH	11AH	11AH	11AH	11AH	11AH	11AK	11AH	11AH	11AP	11AH	11AH	11AH
	11AV	11AV	11AV	13BG	11AV	11AV	11AV	11AV	11AV	13CB	11AU	13CB	11AU
	13BG	13BG	13BG	13BJ	13CB	13BN	13BJ	13BK	13BK	15BD	13BN	13CC	13BJ
	13BN	13BJ	13BJ	13BY	13CC	13BY	13BP	13BM	13BN	15BK	13CG	13CG	13BM
	13BJ	13BY	13BY	15BA	13CG	13CD	13BZ	13BY	13BW	15BL	15BD	15BD	13BV
	13BV	15BA	15BA	15BD	15AZ	15AZ	15BD	15BD	15BD	17BW	15BK	15BK	15BB
	15AZ	15BD	15BD	15BK	15BD	15BD	15BK	15BJ	15BJ	17BZ	15BL	15BL	15BD
	15BD	15BK	15BK	17BW	15BK	15BJ	15BL	15BL	15BL	17CD	17BW	17BW	15BK
	15BK	17BW	17BY	17BY	15BR	17CD	17BY	17BY	17BZ	19AS	17BZ	17BZ	17BW
	15BL	17BY	17CG	17CE	17BW	17CG	17CD	17BY	17CD	23DC	17CD	17CE	17BY
	17BW	17CD	17CJ	19AS	17BY	17CH	17CG	17CD	17CG	31AY	19AS	19AW	17CE
	17BY	19AS	19AU	21AW	17CD	19AV	19AV	19AU	19AS	31AZ	23DC	23DC	19AW
	17CD	21AW	21AW	23DC	19AS	23DC	21AW	23DC	21AZ	33AT	31AY	23DE	23DC
	19AS	23DC	23DC	31AY	23DC	31AY	23DC	23DH	23DC	35AH	31BC	31AY	31AY
	21AW	23DJ	23DJ	31AZ	23DE	31BD	31AY	23DJ	31AY	45BN	33AT	31AZ	31BD
	23DC	31AY	31AY	33AS	31AY	33AT	31AZ	31AY	31AZ	45BS	45BB	33AT	33AT
	23DK	31AZ	31AZ	35AU	31AZ	45BM	33AT	31AZ	33AT	47AK	47AG	35AV	45BB
	23DV	33AS	33AT	35AW	33AT	45BN	35AU	33AT	45BH			35BC	47AB
	31AY	35AU	35AU	45AZ	35AV	45BP	35BB	35AU	47AG			45BH	
	31AZ	35AW	35AW	45BA	35BD	45BW	45BB	35BB				45BM	
	33AT	45BA	45BD	45BD	45BG	47AG	47AR	45BU				47AG	
	35AU	45BD	47AL	47AG	45BV		47BA	47AG					
	35AW	47AL	47AR	47AL	47AB		47BB						
	45BB	47AR											
	47AG												

SPEC NO.	10530	10531	10538	10539	10540	10541	10543	10550	10551	10552	10556	10557	10558
SALES OPTION CODE NUMBERS	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AR	11AP	11AH	11AH	11AH
	11AV	11AV	11AW	11AW	11AW	11AW	11AW	11AV	11AV	11BE	11AV	11AV	11AV
	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	11AV	11PP	11PP	13CB
	13BN	13BN	13BV	13BV	13BV	13BV	13BN	13BM	13BN	13BJ	13CB	13CF	13CC
	13BV	13BV	13CR	13CR	13CR	13CR	13BZ	13BY	13BV	13BN	13CC	13CG	13CG
	13CC	15BD	15BD	15BD	15BD	15BD	15BD	15BA	15BD	13BV	13CG	13CH	15BD
	13CG	15BK	15BJ	15BJ	15BJ	15BJ	15BJ	15BD	15BK	15BD	15AZ	15AZ	15BK
	15BD	15BL	15BL	15BL	15BL	15BL	15BL	15BJ	15BL	15BK	15BD	15BD	15BL
	15BK	17BZ	17BW	17BW	17BW	17BW	17BW	17BY	17BZ	15BL	15BK	15BK	17BW
	15BL	17CD	17BY	17BY	17BY	17BY	17BY	17CG	17CD	17BZ	17BW	15BL	17CD
	17BZ	17CG	17CE	17CD	17CD	17CD	17CD	17CK	17CG	17CD	17CD	17BW	17CF
	17CD	19AS	19AS	19BA	17CN	19AU	19AU	19AV	19AS	17CG	17CF	17CD	19AS
	17CG	23DC	23DC	23DC	19BA	19BC	23DC	21AW	23DC	19AS	19AS	17CF	19BB
	19AS	31AY	23DN	23DN	19BB	23DC	31AY	23DC	31AY	23DC	19BB	19AS	23DC
	23DC	31AZ	31AY	31AY	19BC	23DN	31AZ	23DH	31AZ	31AY	23DC	19BB	23DN
	31AY	33AT	31AZ	31AZ	23DC	31AY	33AT	23DJ	33AT	31AZ	23DJ	23DC	31AY
	31AZ	35BC	33AT	33AT	23DN	31AZ	35BJ	31AY	35BC	33AT	23DN	23DE	31AZ
	33AT	35CH	35AU	35AU	31AY	33AT	45BB	31AZ	45BT	35BC	31AY	31AY	33AT
	35BC	45BE	35BK	35BK	31AZ	35AU	47AR	33AT	47AA	35CH	31AZ	31AZ	35AV
	45BB	45BM	45BB	45BB	33AT	35BK		35AU	47AG	45BS	33AT	33AT	35BE
	45BM	45BW	47AR	47AR	35AU	45BB		35BH			35AV	35AV	45BH
	45BW				35BK	47AR		45BH			35BE	35BE	47AG
	47AA				35BL			47AL			45BH	45BH	
	47AG				45BB			47AR			45BM		
					47AR			47BA					

### Sales Option Code Table

SPEC NO.	10559	10560	10561	10562	10563	10590	10596	10601	10605	10606	10608	10626
	11AH	11AH	11AH	11AH	11AH	11AH	11AK	11AH	11AH	11AH	11AH	11AH
	11AV	11AV	11AV	11AV	11AV	11AU	11AV	11AV	11AV	11AV	11AV	11AV
	13BJ	13BM	13BK	13BJ	13BN	13BM	13BJ	13BR	13BJ	13BK	13BG	13BJ
	13BN	13CG	13BP	13BM	13BV	13BV	13BN	13BV	13BN	13BM	13BY	13BN
SALES	13BZ	15BD	13BV	13BV	13CD	13CG	13BV	13CD	13BV	13BY	13CK	13BV
OPTION	15BD	15BK	15AZ	15BB	15BD	15BC	15BD	15BD	15BD	15BD	15BD	15BD
CODE	15BK	15BL	15BD	15BD	15BK	15BD	15BJ	15BK	15BK	15BJ	15BK	15BK
NUMBERS	15BM	17BW	15BJ	15BK	15BL	15BK	15BL	15BL	15BL	15BL	15BL	15BL
	17BW	17BZ	15BK	17BW	17BZ	17BW	17BZ	17BZ	17BZ	17CD	17BY	17BZ
	17BY	17CD	15BL	17BY	17CD	17BY	17CD	17CD	17CD	17CF	17CD	17CD
	17CD	19AS	17BW	17CD	17CG	17CE	17CG	17CG	17CG	17CM	17CG	17CG
	19AS	23DC	17BY	19AS	19AS	19AW	19AV	19AS	19AS	19AS	19AS	19AS
	23DC	23DE	17CD	23DC	23DC	23DC	23DC	23DC	23DC	23DC	21BF	23DC
	31AY	31AY	19AS	31AY	31AY	31AY	31AY	31AY	23DE	23DH	23DC	31AY
	31AZ	31AZ	21AW	31BD	31AZ	31AZ	31AZ	31AZ	31AY	23DJ	23DJ	31AZ
	33AT	33AT	23DC	33AT	33AT	33AT	33AT	33AT	31AZ	31AY	31AY	33AT
	35AU	35AU	31AY	45BB	35BC	45BB	35AU	35BC	33AT	31AZ	31AZ	35AU
	35BB	35BB	31AZ	47AB	39AG	47AB	35BB	39AG	35CH	33AS	33AV	35BC
	45BB	45BF	33AT		45BB		45BB	45BB	45BE	35AU	35AU	45BE
		47AG	35AU		45BW		45BW	45BW	45BW	35BH	35AW	45BM
			35BH		45BW		47AB			45BU	45BA	45BW
			45BB		47AA					47AG	45BD	47AA

SPEC NO.	10630	10632	10641	10642	10643	10645	10646	10648	10649	10662	10666	10667	10670
	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AR	11AH	11AH	11AH	11AH	11AP
	11AW	11AV	11AV	11AV	11AV	11AU	11AV	11AV	11AV	11AV	11AV	11AV	11AV
	11PP	13BJ	13BK	13BG	13BJ	13BS	13BM	13BR	13BJ	13BM	13BJ	13BJ	11BE
	13CB	13BN	13BN	13BJ	13BY	13CG	13CC	13BY	13BP	13CC	13BN	13BN	13BJ
SALES	13CC	13BV	13BW	13BY	13CL	15BA	13CG	13CD	13BW	13CG	13BV	13BV	13BN
OPTION	13CG	15BB	15BD	15BA	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	13BV
CODE	15AZ	15BD	15BJ	15BD	15BJ	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BD
NUMBERS	15BD	15BK	15BL	15BK	15BM	17BW	15BL	15BL	15BL	15BL	15BL	15BL	15BK
	15BK	17BZ	17BZ	17CF	17CD	17BZ	17BW	17BZ	17BW	17BY	17CD	17BZ	15BL
	15BR	17CD	17CD	17CJ	17CF	17CD	17BY	17CD	17BZ	17CD	17CF	17CD	17BZ
	17BW	17CG	17CG	17CM	19AV	19AW	17CD	17CG	17CD	17CM	17CG	17CM	17CD
	17BY	19AS	19AS	19AU	23DC	21AZ	19AS	19AS	19AV	19AS	19AS	19AS	17CG
	17CD	23DC	21BB	21AZ	31AY	23DC	23DC	23DC	21AG	23DC	23DC	23DC	19AS
	19AS	31AY	23DC	23DC	31AZ	23DE	23DE	23DE	23DC	23DE	31AY	31AY	23DC
	23DC	31AZ	23DK	31AY	33AT	31AY	31AY	31AY	23DK	31AY	31BC	31AZ	31AY
	23DE	33AT	31AY	31AZ	35AU	31BC	31AZ	31AZ	31AY	31AZ	33AT	33AT	31AZ
	31AY	45BB	31AZ	33AT	35BB	33AT	33AT	33AT	31AZ	33AT	45BB	35AV	33AT
	31AZ	45BW	33AT	35AU	45AZ	35AU	35AV	35BC	33AT	35AV	45BW	35BC	35BC
	33AT	47AB	35AU	35AW	45BF	35BB	35BB	39AG	35AU	35BH	47AA	45BE	35CH
	35AV		35BH	45AZ	47AL	45BB	45BF	45BT	35BB	45BF		45BM	45BT
	35BD		45BH	45BD	47AP		47AG	45EC	45BB	47AG		45BW	
	45BG		47AG	47AG					45BW			47AA	
	45BM			47AL									

### Sales Option Code Table

SPEC NO.	10671	10674	10675	10676	10677	10678	10680	10685	10691	10692	10698	10701	10706
SALES OPTION CODE NUMBERS	11AH	11AP	11AH	11AH	11AV	11AH	11AR	11AH	11AH	11AH	11AP	11AH	11AH
	11AV	11AV	11AV	11AY	13BJ	11AV	11AV	11AV	11AW	11AW	11AV	11AV	11AV
	13BJ	13BM	13BJ	13BJ	13BP	13BM	13BT	13BJ	13BJ	13BJ	13BS	13BJ	11PP
	13BN	13BV	13BM	13BW	13BV	13BV	13BV	13BM	13BS	13BS	13BV	13BR	13CF
	13BV	13CD	13BN	13CM	15AZ	13CD	13CD	13BV	13BZ	13BZ	13CG	13BV	13CG
	15BB	15BA	13BV	15AZ	15BD	15BD	15BD	15BD	15BD	15BD	15BA	15BD	13CH
	15BD	15BD	15BD	15BD	15BK	15BK	15BK	15BK	15BJ	15BJ	15BD	15BK	15BD
	15BK	15BK	15BK	15BJ	17BZ	15BL	15BL	15BL	15BL	15BL	15BL	15BK	15BL
	17BZ	17BW	15BL	15BZ	17CG	17BZ	17BZ	17BW	17BW	17BW	17BW	17BZ	15BL
	17CD	17BY	17BW	17BW	17CV	17CD	17CD	17BY	17BY	17BY	17BY	17BZ	17CD
	17CG	17CD	17BY	17BY	19AV	17CM	17CG	17CD	17CE	17CD	17CD	17CM	17CF
	19AS	19AS	17BZ	17CD	21AW	19AU	19AS	19AS	19AS	19AS	19BA	19AS	19AS
	23DC	21BM	17CD	19AS	23DC	23DC	23DC	21BE	23DC	23DC	23DC	23DC	19AS
	31AY	23DC	19AS	21BG	31AY	31AY	23DE	23DC	23DN	23DN	23DE	31AY	23DC
	31AZ	31AY	23DC	21BH	31AZ	31AZ	31AY	31AY	31AY	31AY	31AY	31AZ	23DE
	33AT	31AZ	23DN	23DC	33AT	33AT	31AZ	31AZ	31AZ	31AZ	31AZ	31BC	33AT
	35AV	33AT	31AY	31AY	35AU	35BC	33AT	33AT	33AT	33AT	33AT	35AV	31AZ
	35BB	35AV	31AZ	31AZ	35BC	39AG	35BC	35AV	35AU	35AU	35AV	35BB	33AT
	45BB	35BC	33AT	33AV	45BT	45BE	39AG	35BC	35BK	35BK	35BB	45BB	35BB
	45BW	39AG	35AU	35AU	45EC	45BW	45BT	39AG	45BB	45BB	45BS	45BW	45BH
	47AB	45BS	35BH	35BH	47AL	47AB	47AA	45BB	47AG	47AG	47AA		47AG
		47AB	45BB	45AZ	47AR			45BW	47AR	47AR			
			45BW	45BB	47BA			47AB					
				45BL									
				47AL									
				47AS									

SPEC NO.	10709	10712	10714	10720	10721	10722	10725	10729	10731	10734	10735	10736	10740
SALES OPTION CODE NUMBERS	11AH	11AH	11AH	11AH	11AH	11AH	11AR	11AH	11AH	11AH	11AH	11AH	11AH
	11AV	11AU	11AV	11AW	11AW	11AW	11AW	11AV	11AV	11AV	11AV	11AV	11AV
	13BJ	13BJ	13BK	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13CB	11PP	13CB	13BM
	13BN	13BS	13BM	13BM	13BN	13BN	13BN	13BR	13BM	13CC	13CF	13CC	13BU
	13BV	13BV	13BV	13BV	13BV	13BV	13BV	13BV	13BV	13CG	13CG	13CG	13CD
	15BD	15BB	15BD	15BB	15BD	15BD	15BD	15BD	15BD	15BD	13CH	15BD	15BD
	15BJ	15BD	15BJ	15BD	15BK	15BK	15BK	15BK	15BK	15BK	15AZ	15BK	15BK
	15BL	15BK	15BL	15BK	15BL	15BL	15BL	15BL	15BL	15BL	15BD	15BL	15BL
	17CD	17BW	17CD	17BW	17BZ	17BZ	17BZ	17CD	17BZ	17BW	15BK	17BW	17BW
	17CF	17CE	17CF	17BY	17CD	17CD	17CD	17CD	17CM	17CD	17CD	17BW	17CD
	17CG	17CF	17CG	17CD	17CG	17CG	17CG	17CG	17CR	17CG	17CF	17CD	17CF
	19AV	19AW	19AS	19AS	19AS	19AS	19AS	19AS	19AS	19AS	19AS	17CF	19AS
	23DC	23DC	21BM	23DC	23DC	23DC	23DC	23DC	23DC	23DC	19BB	19AS	19BB
	31AY	31AY	23DC	31AY	31AY	31AY	31AY	31AY	31AY	31AY	23DC	19BB	23DC
	31AZ	31BD	31AY	31BD	31AZ	31AZ	31AZ	31AZ	31AZ	31BD	23DN	23DC	23DN
	33AT	33AT	31AZ	33AT	33AT	33AT	33AT	33AT	33AT	33AT	31AY	23DJ	31AY
	35AU	45BB	33AT	45BB	35BC	35BC	35BC	35AV	35AV	31AZ	23DN	31AZ	31AZ
	35BB	47AB	35AU	47AB	35CH	35CH	35CH	35BB	35BB	33AT	31AY	33AT	33AT
	45CC		35BB		45BE	45BB	45BT	45BB	45BB	35AV	31AZ	35AV	35BC
			45BB		45BW	45BW	45EC	45BW	45BW	35BE	33AT	35BE	39AG
								47AB	47AB	45BH	35AV	45BH	45BB
										45BM	35BE	47AG	45BW
										47AG	45BH		
											47AG		



### Sales Option Code Table

SPEC NO.	10741	10742	10744	10748	10753	10754	10756	10759	10760	10765	10769	10775	10776
SALES OPTION CODE NUMBERS	11AP	11AH	11AH	11AH	11AR	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AV	11AV	11AV	11AV	11AU	11AW	11AV	11AV	11AV	11AW	11AW	11AW	11AW
	13BJ	13BG	13BJ	13BJ	13BJ	13CB	13BR	13CB	13BJ	11PP	13BJ	11PP	11PP
	13BM	13BJ	13BN	13BM	13BT	13CC	13BV	13CD	13BR	13CB	13BN	13BJ	13BJ
	13BV	13BV	13BV	13BV	13BV	13CG	13CG	15BD	13BU	13CC	13BW	13BN	13BN
	15BD	15AZ	15BB	15BB	15BD	15AZ	15BK	15BK	15BD	13CG	15BD	13BY	13BY
	15BK	15BD	15BD	15BD	15BK	15BD	15BL	15BL	15BJ	15AZ	15BK	15BA	15BA
	15BL	15BK	15BK	15BK	15BL	15BK	15BU	17BW	15BL	15BD	15BL	15BD	15BD
	17BW	17BY	17BZ	17BZ	17BW	15BR	17BZ	17CD	17BW	15BK	17BZ	15BK	15BK
	17BZ	17CD	17CD	17CG	17BY	17BW	17CD	17CF	17BY	15BR	17CD	17BY	17BY
	17CD	17CG	17CG	17CK	17CE	17BY	17CM	19AS	17CD	17BW	17CG	17CD	17CD
	19AV	19AS	19AS	19AS	19AW	17CD	19AS	23DC	19AS	17BY	19AS	17CG	17CG
	23DC	23DC	23DC	21BE	23DC	19AS	21BK	23DJ	21AG	17CD	23DC	19AS	19AS
	31AY	23DE	23DE	23DC	31AY	23DC	23DC	23DN	23DC	19AS	23DK	23DC	23DC
	31AZ	23DV	31AY	31AY	31AZ	23DN	31AY	31AY	31AY	23DC	31AY	23DJ	23DJ
	33AT	31AY	31AZ	31BD	33AT	31AY	31AZ	31AZ	31BC	23DJ	31AZ	31AY	31AY
	35BC	31AZ	33AT	33AT	35BC	31AZ	33AT	33AT	33AT	23DN	33AT	31AZ	31AZ
	45BT	33AT	35AV	35AU	45BT	33AT	35AV	35AV	35AV	31AY	35AU	33AT	33AS
	47AG	45BC	35BB	35BB	47AB	35AV	35BB	35BC	35BC	31BD	35BB	35AU	35AU
		47AG	45BB	45BB		35BD	45BB	39AG	45BB	33AV	45BB	35AW	35AW
			45BW	45BW		45BG	45BW	45BF	47AB	35AV	45BM	45BE	45BE
				47AB		47AR		45BM		45BG	47AG	45BM	45BM
								47AB		45BD		47AG	
										45BM			
										47AR			

SPEC NO.	10779	10780	10782	10783	10784	10788	10790	10791	10796	10797	10808	10815	10816
SALES OPTION CODE NUMBERS	11AH	11AH	11AH	11AH	11AP	11AH	11AH	11AH	11AH	11AP	11AH	11AH	11AH
	11AW	11AW	11AW	11AV	11BE	11AW	11AV	11AW	11AW	11BE	11AV	11AW	11AV
	13BJ	13BJ	11PP	13BK	11AV	13BM	11AW	13BJ	13BJ	11AW	13BJ	13BJ	13BJ
	13BV	13BS	13BN	13BM	13BJ	13BV	11PP	13BN	13BM	13BJ	13BP	13BN	13BM
	13CR	13BZ	13BW	13BY	13BT	13CD	13CB	13BU	13BV	13BM	13BZ	13BY	13BV
	15BD	15BD	13CD	15BD	13BV	15BD	13CD	15BD	15BD	13BV	15BA	15BA	15BB
	15BJ	15BJ	15BD	15BJ	15BD	15BK	15BD	15BK	15BK	15BD	15BD	15BD	15BD
	15BL	15BL	15BJ	15BL	15BK	15BL	15BK	15BL	15BL	15BK	15BJ	15BK	15BK
	17BW	17BW	15BL	17CD	15BL	17BW	15BL	17BW	17BW	15BL	17CF	17BY	17BW
	17BY	17BY	17CG	17CF	17BZ	17BY	17BW	17CD	17BY	17BW	17CG	17CD	17BY
	17CD	17CD	17CH	17CM	17CG	17CD	17CD	17CF	17CD	17BY	17CJ	17CG	17CD
	19AS	19AS	17CV	19AU	19AU	19AS	17CF	19AV	19AS	17CD	19AV	19AS	19AS
	23DC	23DC	19AV	23DC	21BE	23DC	19AS	23DC	21BE	19AU	21BB	23DC	23DC
	23DN	23DN	23DC	23DH	23DC	31AY	23DC	31AY	23DC	21BE	23DC	23DJ	31AY
	31AY	31AY	31AY	23DJ	31AY	31AZ	23DJ	31AZ	31AY	23DC	23DK	31AY	31BC
	31AZ	31AZ	31BD	31AY	31BC	33AT	23DN	33AT	31AZ	23DE	31AY	31AZ	33AT
	33AT	33AT	33AT	31AZ	33AT	35BC	31AY	35AU	33AT	31AY	31AZ	33AV	45BB
	35AU	35AU	35BA	33AS	35BC	39AG	31AZ	35BB	35AU	31AZ	33AT	35AU	47AB
	35BK	35BK	45BM	35AU	35CH	45BB	33AT	45BE	35BB	33AT	35AV	35AW	
	45BB	45BB	45BN	35BH	45BS	47AB	35AV		45BB	35BB	35BH	45BE	
	47AR	47AG	45BP	45BU			35BC		45BW	35CG	35BL	45BM	
		47AR		47AG			39AG			45BT	45AZ		
							45BF				45BJ		
							45BM				47AR		
											47BA		
											47BB		

### Sales Option Code Table

SPEC NO.	10821	10830	10832	10844	10845	10857	10862	10866	10867	10868	10874	10877	10882
SALES OPTION CODE NUMBERS	11AP	11AP	11AH	11BE	11AH	11AH	11AH	11AH	11AH	11AH	11AP	11AH	11AH
	11BE	11BE	11AV	11AW	11AW	11AV	11AW	11AU	11AW	11AV	11BE	11AV	11AV
	11AW	11AW	11AW	13CB	13BR	11PP	13BJ	11PP	11PP	11PP	11AW	13BK	13CB
	13BJ	13BJ	11PP	13CG	13CD	13CB	13BM	13CB	13CB	13CF	13BS	13BN	13CC
	13BN	13BN	13CB	15BD	13CE	13CC	13BV	13CC	13CC	13CG	13CG	13BW	13CG
	13BV	13BV	13CC	15BK	15BD	13CG	15BD	13CG	13CG	13CH	15BD	15BD	15AZ
	13CD	15BD	13CG	15BL	15BK	15AZ	15BJ	15AZ	15AZ	15AZ	15BK	15BJ	15BD
	15BD	15BK	15AZ	17CD	15BL	15BD	15BL	15BD	15BD	15BD	15BL	15BL	15BK
	15BK	15BL	15BD	17CF	17BW	15BK	17BW	15BK	15BK	15BK	17BW	17BZ	17BW
	15BL	17BZ	15BK	17CG	17BY	17BY	17BY	17BW	15BR	17BW	17BY	17CD	17CD
	17BZ	17CD	17BW	19AS	17CD	17CD	17CD	17CD	17BW	17CD	17CD	17CG	17CF
	17CD	17CG	17CD	21BM	19AS	17CM	19AS	17CF	17BY	17CF	19AS	19AS	19AS
	17CG	19AS	17CF	23DC	21BE	19AS	21BE	19AS	17CD	19AS	21BE	21BB	23DC
	19AS	23DC	19AS	23DJ	23DC	19BB	23DC	23DC	19AS	19BB	23DC	23DC	23DJ
	23DC	31AY	19BB	23DN	23DE	23DC	23DH	23DJ	23DC	23DC	23DE	23DJ	23DN
	23DE	31AZ	23DC	31AY	31AY	23DJ	31AY	23DN	23DJ	23DJ	23DN	23DK	31AY
	31AY	33AT	23DJ	31AZ	31AZ	23DN	31AZ	23DV	23DN	23DN	31AY	31AY	31AZ
	31AZ	35BC	23DN	33AT	33AT	31AY	33AT	31AY	31AY	23DV	31AZ	31AZ	33AT
	33AT	35CH	23DV	35AV	35AV	31AZ	35AU	31AZ	31AZ	23EH	33AT	33AT	35AV
	35AV	45BT	31AY	35BC	35BC	33AT	35BB	33AV	33AT	31AY	35AV	45BH	35BB
	35BC		31AZ	45BS	39AG	35AV	45BC	35AV	35AV	31AZ	35BB	47AR	45BF
	39AG		33AT	47AR	45BB	35BD	45BW	35BD	35BD	33AT	45BU		47AR
	45BS		35AV	47BA	45BW	35BH	47AR	45BH	45BG	35AV			47BA
			35BE	47BB		45BF		47AR	45BM	35BE			47BB
			45BH					47AR	47AR	45BH			
								47AZ	47AR	47AR			
								47BB	47AZ	47BB			

SPEC NO.	10888	10889	10896	10897	10898	10904	10905	10906	10907	10911	10920	10923	10924
SALES OPTION CODE NUMBERS	11AH	11AH	11AH	11AH	11AW	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AU	11AW	11AU	11AW	11BE	11AV	11AV	11AW	11AV	11AU	11AV	11AW	11AW
	13BJ	13BJ	13BJ	13BR	13CB	11AW	11AW	13BK	13CF	13BM	13BS	13CF	13CF
	13BM	13BM	13BW	13CD	13CG	13BJ	13BG	13BM	13CG	13CG	13CG	13CG	13CG
	13BV	13BV	13CM	13CE	15BD	13BN	13BJ	13BV	13CH	15BD	15BC	13CH	13CH
	15BB	15BB	15AZ	15BD	15BK	13BV	13BV	15BD	15AZ	15BK	15BD	15BD	15AZ
	15BD	15BD	15BD	15BK	15BL	15AZ	15AZ	15BJ	15BD	15BL	15BK	15BK	15BD
	15BK	15BK	15BJ	15BL	17BZ	15BD	15BD	15BL	15BK	17BW	17CF	15BL	15BK
	17BY	17BY	15BZ	17BW	17CD	15BK	15BK	17BW	17BW	17BY	17CK	17CD	15BL
	17CE	17CD	17BW	17BY	17CG	17BW	17BY	17BZ	17CD	17CE	17DA	17CF	15BZ
	17CG	17CG	17BY	17CD	19AS	17BY	17CD	17CD	17CF	19AW	19AV	17CM	17CD
	19AW	19AS	17CD	19AU	21BM	17CD	17CG	19AS	19AS	21AG	23DC	19AS	17CF
	23DC	23DC	19AS	21BM	23DC	19AS	19AS	23DC	23DC	23DC	23DE	23DC	17CG
	31AY	31AY	21BH	23DC	23DJ	21AW	23DC	31AY	23DJ	23DN	23DJ	23DE	19AS
	31BD	31BD	23DC	23DE	23DN	23DC	23DE	31BC	23DN	31AY	23DN	31AY	19BC
	33AT	33AT	31AY	31AY	31AY	23DK	23DV	33AT	31AY	31AZ	31AY	31AZ	23DC
	45BB	45BB	31AZ	31AZ	31AZ	23DV	31AY	35AU	31AZ	33AT	31AZ	33AT	23DE
	47AR	47AR	33AV	33AT	33AT	31AY	31AZ	35BB	33AT	35AV	33AT	35AV	23DJ
	47AZ	47AZ	35AU	35AV	35AV	31AZ	33AT	45BB	45BF	35BB	45BD	35BC	23DN
	47BB	47BB	35BH	35BC	35BC	33AT	45BC	47AR	45BM	45BB	47AR	45CE	31AY
	47BD	47BF	45AZ	39AG	45BS	45BB		47AR	47AR	47AR	47BA	47AR	31AZ
	47BF	47BD	45BB	45BB	47AR			47BA	47BA	47BB	47BB		33AT
			45BL	45BW	47BA			47BB	47BB				35AV
			47AL	47AR	47BB								35BC
			47AR	47AY									45BM
				47BA									45CE

### Sales Option Code Table

SPEC NO.	10926	10927	10930	10931	10932	10933	10934	10935	10936	10937	10938	10939	10940
	11AH	11AH	11AH	11AK	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
	13BJ	13BJ	13BJ	13BG	13BJ	13BJ	13BG	13BG	13BG	13CF	13CB	13CB	13BG
	13BM	13BM	13BN	13BJ	13BP	13BG	13BJ	13BJ	13BJ	13CG	13CC	13CC	13BJ
SALES	13BV	13BV	13BW	13BW	13BW	13BW	13BW	13BW	13BW	13BW	13CH	13CG	13BW
OPTION	15BD	15BD	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ
CODE	15BK	15BK	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD
NUMBERS	15BL	15BL	15BK	15BK	15BJ	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BK
	17BZ	17BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ
	17CD	17CD	17BZ	17BZ	17CF	17BZ	17BY	17BY	17BY	17CD	17CD	17BY	17BZ
	17CG	17CG	17CD	17CD	17CG	17CD	17CD	17CD	17CD	17CF	17CF	17CD	17CD
	19AS	19AS	17CG	17CG	17CJ	17CG	17CG	17CG	17CG	17CM	17CG	17CG	17CG
	23DC	23DC	19AS	19AS	19AV	19AS	19AS	19AS	19AS	19AS	19AS	19AS	19AS
	31AY	31AY	23DC	23DC	23DC	23DC	23DC	23DC	23EF	23DC	23DC	23DC	23DC
	31AZ	31BC	31AY	23DK	23DK	31AY	23DJ	23DJ	31AY	23DJ	23DJ	23DJ	31AY
	33AT	33AT	31AZ	31AY	31AY	31AZ	23ED	23ED	31AZ	23DN	23DN	23DN	31AZ
	35AU	35AU	33AT	31AZ	31AZ	33AT	31AY	31AY	33AV	31AY	31AY	31AY	33AT
	35BB	35BB	35AU	33AT	33AT	35AU	31AZ	31AZ	45BC	31AZ	31AZ	31AZ	35AU
	45BB	45BB	35BB	35AU	35AV	35BC	33AS	33AV	47AR	33AV	33AT	33AT	35BC
	45BM	45BM	45BM	35BB	35BB	45BE	35AU	35AU	47AW	35AV	35AV	35AV	45BB
	45BW	45BW	45CA	45BB	35BL	45BM	35AW	35AW	47AY	35BD	35BC	35BC	45BM
	47AR	47AR	47AR	45BM	45BJ	47AR	45BD	45BD	47AZ	45BH	45BH	45BG	47AR
			47AZ	47AR	47AR	47AZ	47AR	47AR	47BB	47AR	47AR	45BM	47AZ
			47BB	47AZ	47AZ	47BB	47AZ	47AZ	47BF	47AZ	47AZ	47AR	47BB
			47BF	47BB	47BB	47BF	47BB	47BB		47BB	47BB	47AY	47BF
				47BF	47BF		47BF	47BF		47BF	47BE	47AZ	
												47BF	

SPEC NO.	10941	10942	10943	10944	10945	10952	10955	10956	10957	10958	10975	10976	10982
	11AH	11AH	11AH	11AH	11AR	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AW	11AW	11AW	11AW	11AV	11AV	11AW	11AW	11AW	11AW	11AV	11AW	11AW
	13BG	13BG	13BG	13BN	13BR	13BJ	13BJ	13BJ	13BJ	13BJ	13BK	13BJ	13BJ
	13BJ	13BJ	13BJ	13BW	13BY	13BP	13BY	13BY	13BS	13BS	13BM	13BP	13BM
SALES	13BW	13BW	13BW	13CD	13CD	13BV	13CR	13CR	13BY	13BY	13BY	13BY	13BV
OPTION	15AZ	15AZ	15AZ	15AZ	15BB	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BB
CODE	15BD	15BD	15BD	15BD	15BD	15BJ	15BJ	15BJ	15BJ	15BJ	15BJ	15BJ	15BD
NUMBERS	15BK	15BK	15BK	15BJ	15BK	15BL	15BL	15BL	15BL	15BL	15BL	15BL	15BK
	15BZ	15BZ	15BZ	15BZ	15BL	17BY	17BW	17BW	17BW	17BW	17CD	17BW	17BW
	17BZ	17BZ	17BZ	17BZ	17BZ	17CD	17BY	17BY	17BY	17BY	17CF	17BY	17BY
	17CD	17CD	17CD	17CD	17CD	17CM	17CD	17CD	17CE	17CD	17CM	17CD	17CD
	17CG	17CG	17CG	17CG	17CG	19AU	17CN	19BA	19AS	19BA	19AU	19AS	19AS
	19AS	19AS	19AS	19AS	19AS	21AW	19BA	23DC	23DC	23DC	23DC	23DC	23DC
	23DC	23DC	23DC	23DC	21BJ	23DC	19BB	23DN	23DN	23DN	23DJ	23DN	31AY
	31AY	31AY	31AY	31AY	23DC	31AY	19BC	31AY	31AY	31AY	23DN	31AY	31BD
	31AZ	31AZ	31AZ	31AZ	23DJ	31AZ	23DC	31AZ	31AZ	31AZ	31AY	31AZ	33AT
	33AT	33AT	33AT	33AT	23DN	33AT	23DN	33AT	33AT	33AT	31AZ	33AT	35AV
	35AU	35AU	35AU	45BM	31AY	35AU	31AY	35BK	35BK	35BK	33AS	35BK	35BB
	35BC	35BC	35BC	45BP	31AZ	35BH	31AZ	35BL	35BW	35BW	35AU	35BW	45BB
	45BM	45BM	45BM	47AR	33AT	45BB	33AT	35BW	45BB	45BB	35BH	45BB	47AR
	45BT	45BU	45BS	47AZ	35AV		35BK	45BB	47AR	47AR	45BU	47AR	47BA
	47AR	47AR	47AR	47BB	35BC		35BL	47AR			47AR		47BB
	47AZ	47AZ	47AZ	47BF	39AG		35BW				47BA		
	47BB	47BB	47BB		45BT		45BB				47BB		
	47BF	47BF	47BF		45EC		47AR						

### Sales Option Code Table

SPEC NO.	10994	11000	11003	11004	11006	11007	11016	11017	11031	11040	11051	11054	
SALES OPTION CODE NUMBERS	11AH	11AH	11AH	11AV	11AP	11AH	11AH	11AR	11AH	11AV	11AH	11AH	
	11AW	11AU	11AW	11BE	11AV	11AW	11AW	11AV	11AW	13BR	11AW	11AV	
	13BR	11PP	13BJ	13BM	13BN	13BJ	13BJ	13BR	13BJ	13BY	13BN	13BJ	
	13CD	13CB	13BN	13BV	13BV	13BM	13BM	13BY	13BN	13CD	13BV	13BW	
	13CE	13CC	13BV	13CD	13CD	13BV	13BV	13CD	13BV	15BD	13CD	13CM	
	15BD	13CG	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BK	15BD	15AZ
	15BK	15AZ	15BJ	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BL	15BK	15BD
	15BL	15BD	15BL	15BL	15BL	15BL	15BL	15BL	15BL	15BL	17BZ	15BL	15BJ
	17BW	15BK	17CF	17BY	17CD	17BZ	17BZ	17BY	17BZ	17BZ	17CD	17BZ	15BZ
	17BY	17BY	17CV	17CD	17CF	17CD	17CD	17CD	17CD	17CD	17CG	17CD	17BW
	17CD	17CD	17DA	17CG	17CG	17CG	17CG	17CG	17CG	17CG	19AS	17CG	17BY
	19AU	17CF	19AU	19AS	19AV	19AS	19AS	19AS	19AS	19AS	21BZ	19AS	17CD
	21BE	17CM	21BB	21BZ	21BB	21BH	21BE	21BJ	23DC	23DC	23DC	19AS	19AS
	23DC	19AS	23DC	23DC	23DC	23DC	23DC	23DC	23DC	31AY	23DJ	23DN	21BH
	23DE	19BB	31AY	31AY	23DN	31AY	31AY	23DJ	31AZ	23DN	31AY	31AY	23CD
	31AY	23DC	31AZ	31AZ	31AY	31BC	31AZ	23DN	33AT	31AY	31AZ	31AZ	31AY
	31AZ	23DJ	33AT	33AT	31AZ	33AT	33AT	31AY	35AU	31AZ	33AT	33AT	31AZ
	33AT	23DN	35AU	35AV	33AT	35AU	35AU	31AZ	35BC	33AT	35AV	33AT	33AT
	35AV	31AY	35BC	35BC	35BC	35BD	35BC	33AT	45BB	35AV	35BC	35AU	35AU
	35BC	31AZ	45BD	39AG	39AG	35BH	45BD	35AV	45BW	35BC	39AG	39AG	35BZ
	39AG	33AT	47AR	45BS	45BS	45BC	45BW	35BC	47AR	39AG	45BB	45AZ	45AZ
	45BB	35AV	47BA	47AR		45BM	47AR	39AG	47BA	45BT	47AR	45BB	45BB
	45BW	35BD	47BB	47BA			47AY	45BT	47BB	45EC	47BA	45BL	45BL
	47AR	45BF		47BB			47BB	47AR		47AR	47BB	47AL	47AL
	47AY	47AR					47BD	47BA		47BA		47AR	47AR
	47BA	47AZ						47BD			47BB	47BA	47BA
		47BB											47BF

SPEC NO.	11056	11065	11069	11072	11075	11076	11077	11081	11082	11083	11088	11089	11090
SALES OPTION CODE NUMBERS	11AW	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	13BJ	11AW	11AW	11AW	11AW	11AV	11AV	11AV	11AV	11AW	11AW	11AW	11AV
	13BM	13BN	13BS	13BJ	13BJ	13BK	11PP	13BG	13BG	11PP	13BK	13BJ	13CB
	13BV	13BV	13CG	13BN	13BN	13BN	13CB	13BJ	13BJ	13CB	13BM	13BM	13CC
	15BD	13CD	15BC	13BV	13BV	13BW	13CC	13BY	13BY	13CC	13BV	13BV	13CG
	15BJ	15BD	15BD	15BD	15BD	15AZ	13CG	15BA	15BA	13CG	15BD	15BD	15AZ
	15BL	15BK	15BK	15BJ	15BJ	15BD	15AZ	15BD	15BD	15AZ	15BJ	15BK	15BD
	17BZ	15BL	15CJ	15BL	15BL	15BJ	15BD	15BK	15BK	15BD	15BL	15BL	15BK
	17CD	17BZ	17CF	17BZ	17BY	17CF	15BK	17BW	17BY	15BK	17BY	17BZ	15BZ
	17CG	17CD	17CK	17CD	17CD	17CG	17BW	17BY	17CG	15BR	17CD	17CD	17BW
	19AV	17CG	17DA	17CG	17CG	17CV	17CD	17CD	17CJ	17BW	17CG	17CG	17CD
	23DC	19AS	19AV	19AS	19AS	19AS	17CF	19AS	19AU	17BY	19AS	19AS	17CF
	31AY	21BW	23DC	21AW	23DC	21BB	19AS	21AW	21AW	17CD	21BE	21BE	19AS
	31AZ	23DC	23DE	23DC	23DN	23DC	23DC	23DC	23DC	19AS	23DC	23DC	23DC
	33AT	23DN	23DJ	31AY	31AY	23DJ	23DJ	23DJ	23DJ	23DC	31AY	23DJ	23DJ
	35BC	31AY	23DN	31AZ	31AZ	23DK	23DN	31AY	31AY	23DJ	31AZ	23DN	23DN
	45BT	31AZ	31AY	33AT	33AT	31AY	23DV	31AZ	31AZ	23DN	33AT	31AY	23DV
	45EC	33AT	31AZ	35BC	35CH	31AZ	23EH	33BA	33AW	31AY	35AV	31BC	31AY
	47AR	35AV	33AT	45BB	45EA	33AT	31AY	33BB	33BB	31AZ	35BB	33AT	31AZ
		35BC	45BD	47AR	47AR	45BH	31AZ	35AU	35AU	33AT	45CC	35BC	33AT
		39AG	45BW		47BA	47AR	33AT	35AW	35AW	35AV	47AR	39AG	35AV
		45BB	47AR		47BB	47BA	35AV	45BA	45BD	35BD		45BE	35BE
		45BW	47BA		47BC	47BB	35BE	45BD	47AL	45BG		45BM	45BH
		47AR	47BB				45BH	47AL	47AR	45BM		45BW	45BM
		47BA					47AR	47AR	47BA	47AR		47AR	47AR
		47BB					47AZ	47BA		47AZ		47BB	47AZ
										47BB		47BA	47BB
												47BC	47BC

### Sales Option Code Table

SPEC NO.	11091	11093	11100	11105	11106	11108	11110	11112	11113	11120	11121	11122	11124
SALES OPTION CODE NUMBERS	11AH	11AH	11AH	11AH	11AH	11AW	11AH	11AH	11AV	11AH	11AH	11AH	11AH
	11AW	11AV	11AW	11AW	11AV	13BJ	11AV	11AW	118E	11AW	11AW	11AW	11AW
	13BJ	13BJ	11PP	138G	13BJ	138M	13BK	13BN	138N	13BK	138M	138N	138J
	138N	13BP	13CB	138J	13BP	138V	138M	138W	138V	138M	138V	138V	138N
	138V	138V	13CC	138V	138V	158D	138Y	13CD	13CD	138V	13CD	13CD	138V
	158D	158D	13CG	158D	15AZ	158J	158D	15AZ	158D	158D	158D	158D	158D
	158K	158J	15AZ	158K	158D	158L	158J	158D	158K	158J	158K	158K	158J
	158L	158L	158D	158L	158J	178Z	158L	158J	158L	158L	158L	158L	158L
	178Z	178Y	158K	178Z	178Y	17CD	17CD	158Z	17CD	178Y	17CD	178Z	178Z
	17CD	17CD	158Z	17CD	17CD	17CG	17CF	178Z	17CF	17CD	17CF	17CD	17CG
	17DA	17CM	178W	17CG	17CM	19AV	17CM	17CD	17CG	17CG	17DA	17CG	17CV
	19AS	19AU	17CD	19AS	19AU	218W	19AS	17CG	19AV	19AS	19AS	19AS	19AS
	23DC	21BK	17CF	21BE	23DC	23DC	23DC	19AS	21BE	21BE	21AG	21CA	21AW
	31AY	23DC	19AS	23DC	31AY	31AY	23DJ	23DC	23DC	23DC	23DC	23DC	23DC
	31AZ	31AY	23DC	31AY	31AZ	31AZ	23DN	31AY	23DN	31AY	23DN	23DJ	31AY
	33AT	31AZ	23DJ	31AZ	33AT	33AT	31AY	318D	31AY	31AZ	31AY	23DN	31AZ
	35AV	33AT	23DN	33AT	35AU	35CH	31AZ	33AT	31AZ	33AT	31AZ	31AY	33AT
	358C	35AU	31AY	35CH	35BH	458T	33BA	458M	33AT	35AV	33AT	31AZ	35CH
	458E	358H	31AZ	458S	458B	458C	35AU	458P	358C	358C	35AV	33AT	458B
	458W	458B	33AT	47AR	47AR	47AR	358H	47AR	39AG	45CC	35CH	35AV	47AR
	47AR	47AR	35AV		47BA	47BA	458U	47AZ	458S	47AR	39AG	358C	47BA
	478A	478A	358B		478B	478B	458C	478B	47AR	478A	458B	39AG	478B
	478B	478B	458G				47AR	47BF	478A	478B	458W	458B	
			458M				47AZ		478B		47AR	458W	
			47AR				478B				47BA	47AR	
			47AZ								478B	47AZ	
			478B									478B	

SPEC NO.	11126	11127	11128	11134	11135	11137	11140	11145	11147	11149	11153	11249	
SALES OPTION CODE NUMBERS	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AK	
	11AW	11AW	11AW	11AW	11AV	11AV	11AV	11AV	11AW	11AV	11AW	11AW	
	138J	11PP	138G	138N	11PP	138S	11PP	138J	138K	138J	138N	138G	
	138M	138J	138J	13CG	138B	138K	13CG	138N	138M	138M	138V	138J	
	138V	138N	138W	158B	13CC	138V	13CL	138V	138U	138Y	13CD	138W	
	158D	138Y	15AZ	158D	13CG	158D	15AZ	158D	158D	158A	158D	15AZ	
	158K	158A	158D	158K	15AZ	158J	15CL	158K	158J	158D	158K	158D	
	158L	158D	158K	178Z	158D	158L	17CD	158L	158L	158J	158L	158K	
	178Z	158K	158Z	17CD	158K	178Z	17CF	178Z	178Z	178Y	178Z	158Z	
	17CD	178Y	178Y	17DA	178W	17CD	17DE	17CD	17CD	17CG	17CD	178Z	
	17CG	17CD	17CD	19AS	17CD	17CG	19AS	17CG	17CG	17CG	17CK	17DA	17CD
	19AS	17CG	17CG	23DC	17CF	19CK	198B	19AS	19AS	19AS	19AV	19AS	17CG
	218E	19AS	19AS	31AY	19AS	218E	23DC	23DC	218H	21AW	218W	19AS	
	23DC	23DC	23DC	31AZ	198B	23DC	23DJ	23DJ	23DJ	23DC	23DC	23DC	23DC
	23DJ	23DJ	23DJ	33AT	23DC	23DH	23DN	23DN	23DC	23DH	23DN	23DK	
	23DN	31AY	23ED	35AV	23DJ	31AY	23DV	31AY	23DN	23DJ	31AY	31AY	
	31AY	31AZ	31AY	358C	23DN	318C	23EH	31AZ	31AY	31AY	31AZ	31AZ	
	318C	338A	31AZ	458E	23DV	33AT	31AY	33AT	31AZ	31AZ	33AT	33AV	
	33AT	35AU	338A	458W	23EH	35AU	31AZ	358C	33AW	33AT	35AV	35AU	
	35AV	35AW	338B	47AR	31AY	358C	33AT	458E	35AV	35AU	358C	358B	
	358C	458E	35AU	478A	31AZ	458D	35AV	458W	358C	358H	39AG	458B	
	39AG	458M	35AW	478B	33AT	47AR	358E	47AR	458B	458B	458B	47AR	
	458E	47AR	458D	47BF	35AV	478A	458H	478A	47AR	47AL	458W	47AZ	
	458M	478A	47AR		358E	478B	47AR	478B	47AZ	47AR	47AR	478B	
	458W	478B	47AZ		458H		47AL		478B	478A	47AZ	478B	
	47AR		478B		47AR		47AZ				478B		
			47BF		47AZ								
					478B								

## Sales Option Code Table

SPEC NO.	11251	11252	11253	11254	11255
	11AH	11AH	11AH	11AH	11AH
	11AW	11AW	11AW	11AW	11AW
	13BJ	13BJ	13BJ	13BJ	13BJ
	13BN	13BN	13BN	13BN	13BN
SALES	13BV	13BV	13BV	13BV	13BV
OPTION	15AZ	15AZ	15AZ	15AZ	15AZ
CODE	15BD	15BD	15BD	15BD	15BD
NUMBERS	15BK	15BK	15BK	15BK	15BK
	15BZ	15BZ	15BZ	15BZ	15BZ
	17BZ	17BZ	17BZ	17BZ	17BZ
	17CD	17CD	17CD	17CD	17CD
	17CG	17CG	17CG	17CG	17CG
	19AS	19AS	19AS	19AS	19AS
	23DC	23DC	23DC	23DC	23DC
	31AY	31AY	31AY	31AY	31AY
	31AZ	31AZ	31AZ	31AZ	31AZ
	33AT	33AT	33AT	33AT	33AT
	35CH	35CH	35CH	35CH	35CH
	45BB	45BE	45BS	45BU	45BT
	45BW	45BW	47AR	47AR	47AR
	47AR	47AR	47AZ	47AZ	47AZ
	47AZ	47AZ	47BB	47BB	47BB
	47BB	47BB	47BF	47BF	47BF
	47BF	47BF			

**Sales Codes**  
**Listed Below are Sales Option Code Numbers**  
**These Codes are Used on P216, P218, P220**

11AH Standard Bearing Plate	21AZ Exhaust Tubes (Strt Back) with Covers
11AK 4 Boss 5.7 BC Bearing Plate	218B Exhaust Tubes (Strt Back) with Cover and Bracket
11AU Standard Block	21BE Exhaust Tubes (Nar) with Cover and Bracket
11AV Premium Block	21BF Exhaust System (Narrow) Off-Set
11AW Premium Block with Standard Thrust Washer	21BH Exhaust System (X-Over) with Covers
11AY Standard Block (Premium Head)	21BJ Exhaust Tube (Narrow) without Covers
11AZ Hydraulic Lifters	21BK Right Outlet Manifold
11BB Premium Block (Deere) Standard Bearing Plate	21BM Narrow Exhaust Tube with Cover-Muffler and Cover SPI
11BC Replacement Block - M Series	21BW Manifold-Right Rear-Down
11BE Adapter, Pump (SAE A)	21BZ Flanged, Exhaust Adapter 1.1250D
11PP Plastic Plugs (Inserted in Block)	21CA Crossover Manifold without Covers
13BG Governor-3450 High Idle	23DC Press Cooled Housing and Wheel
13BJ Side Pull Governor	23DE Stationary Guard without PTO
13BK Front Pull Governor	23DH Stationary Guard with PTO
13BM 3850 High Idle	23DJ Omit Rotating Screen
13BN 3600 High Idle	23DK Cylinder Air Housings with Weld Nuts
13BP 3300 High Idle	23DN Stationary Grill (without PTO-Plastic)
13BR 3200 High Idle	23DZ M Engine Components
13BS 2800 High Idle	23ED Stationary Guard/Plastic with PTO
13BT 2600 High Idle	23EF Housing and Wheel Ingersoll (B)
13BU 1100 Low Idle	23EH Inverted Volt Reg (Cyl Air Housing)
13BV 1200 Low Idle	31AY Electronic Ignition
13BW 1300 Low Idle	31AZ Alternator-12V,20A
13BY 1400 Low Idle	31BC Alternator, 12V/35A
13BZ 1500 Low Idle	31BD Omit Alternator
13CB 3780 High Idle	31BJ Alternator 12V (Deere) - 20 Ampere
13CC Governor Arm Extension-Diameter .141	33AS Starter-Solenoid Shift (Down) - Aluminum Wire
13CD Omit Governor Linkage	33AT Starter-Solenoid Shift (Side)
13CE 1800 Low Idle	33AV Starter-Bendix
13CF 1850 High Idle	33AW Starter-Solenoid Shift (Side) Dustproof
13CG Fixed Speed Governor	33AZ Starter-Solenoid Shift & Recoil
13CH 10 Ball Governor Replaces 5 Ball Governor	33BA Starter-Solenoid Shift (Down) Premium - Copper Wire
13CK Side Pull Governor with Blower Housing Cutout	33BB Omit Starter Cap Kit
13CL 3000 RPM High Idle	35AU (309-0546) Pressure Switch (1 Terminal/NC)
13CM 3400 RPM High Idle	35AV (309-0105) Pressure Switch (2 Terminal/NO)
13CR 3550 RPM High Idle	35AW 3 Pin Harness
15AZ Fuel Pump-Omit Filter (Dual Inlet)	35BA Oil Pressure Sender (40 PSI)
15BA Fuel Pump-Inline Filter (Top)	35BB 4 Pin Harness with Mating Connector
15BB Omit Pump-Inline Filter	35BC 6 Pin Harness with Mating Connector
15BC Omit Pump-Omit Filter	35BD 4 Pin Harness - Ext 10"
15BD Down Carb-Manual Choke	35BE 6 Pin Harness with LT Rear Interface
15BJ Front Pull Choke	35BH 4 Pin Harness
15BK Rear Pull Choke	35BK 9 Pin Harness
15BL Fuel Pump with Filter (Dual Inlet)	35BL High Engine Temperature Switch
15BM Fuel Pump without Filter (Top Inlet)	35BW Pressure Switch (2 Terminal/NO)
15BR 17" Fuel Line without Filter	35BZ 6 Pin Harness
15BU Downdraft Carb-Dual Fuel (Left)	35CG 4 Pin/2 Wire with Mating Connector
15BZ 5" Fuel Line with Filter (Svc SD)	35CH 6 Pin/4 Wire with Mating Connector
15CJ Fuel-Cutoff-Solenoid	39AG Control Panel
15CL Carb-Manifold-Auto Choke	45AZ Screen-Less Ctr Bolts
17AS Oil Filter-Remote	45BA Electric Clutch Adapter
17BW Oil Base-Standard Capacity with Side Drain Only	45BB 1.12 Diameter St Shaft 3.95 to RFB
17BY Oil Fill Tube & Indicator (5.73 x 11.592) Inner	45BC 1.12 Diameter St Shaft 2.25 to RFB
17BZ Oil Fill Tube & Indicator (8.099 x 8.457) Outer	45BD 1.44 Diameter St Shaft 3.77 to RFB
17CD Oil Filter-Spinon	45BE 1.44 Diameter St Shaft 3.99 to RFB
17CE Omit Oil Filter	45BF 1.12 Diameter TP Shaft 3.11 to RFB
17CF Oil Fill Tube & Indicator (8.375 x 11.679) Extended	45BG 1.12 Diameter TP Shaft 4.96 to RFB
17CG Oil Base-Standard Capacity (Opt Drains)	45BH 1.12 Diameter TP Shaft 2.18 to RFB
17CH Oil Fill Tube & Indicator (Outer 11D Frt Up)	45BJ 1.12 Diameter TP Shaft 2.55 to RFB
17CJ Remote Oil Filter With ORS Lines	45BL Crankshaft-Balance Weight
17CK Remote Oil Filter Adapter Plate	45BM 6 Holes-Rear of Block
17CM Oil Base Hi-Capacity-2.5 Quart	45BN Single Groove Front Pulley
17CN Chrome Oil Fill Tube	45BP 1.50 Diameter St Shaft 2.74 to RFB
17CR Oil Fill Tube & Indicator (Outer-13/4 QTW/17CM)	45BS Internal Splined 9 Tooth Crank
17CV Oil Filter-Hex Nut	45BT Internal Splined 13 Tooth Crank
17DA Oil Base-3 Quart (Sandcast)	45BU Internal Splined 11 Tooth Crank
17DE Oil Base Standard Capacity with Temperature Switch	45BW Add Crankshaft Key
19AS Air Intake System-Extended Serv Life	45BY 1.12 Diameter St Shaft 5.00 to RFB
19AU High Capacity-Air Cleaner	45BZ 1.04 Diameter TP Shaft 3.63 to RFB
19AV Remote Air Cleaner Adapter	45CA 1.12 diameter St/Shaft 4.71 to RFB
19AW Air Intake Sys-Standard Capacity	45CC Crankshaft-No PTO (Stub)
19BA Air Cleaner-XSL with Reset Switch	45CE Crankshaft 1.63D TP Shaft (Fldltr)
19BB Chrome Air Cleaner Cover	45EA 1.12 Diameter St/Shaft-4.71 to RFB
19BC Intake Manifold with Vacuum Top	45EB Adapter, Pump-(SAE-A)
19CK Elbow, Remote Air Cleaner-HAKO Only	45EC Adapter, Pump-(SAE-B)
21AG Flanged, Exhaust Adapter 1.28 OD	47AL Omit Labels
21AW Exhaust Tube (Narrow) with Covers	47AW Ingersoll B - Installation and Connection



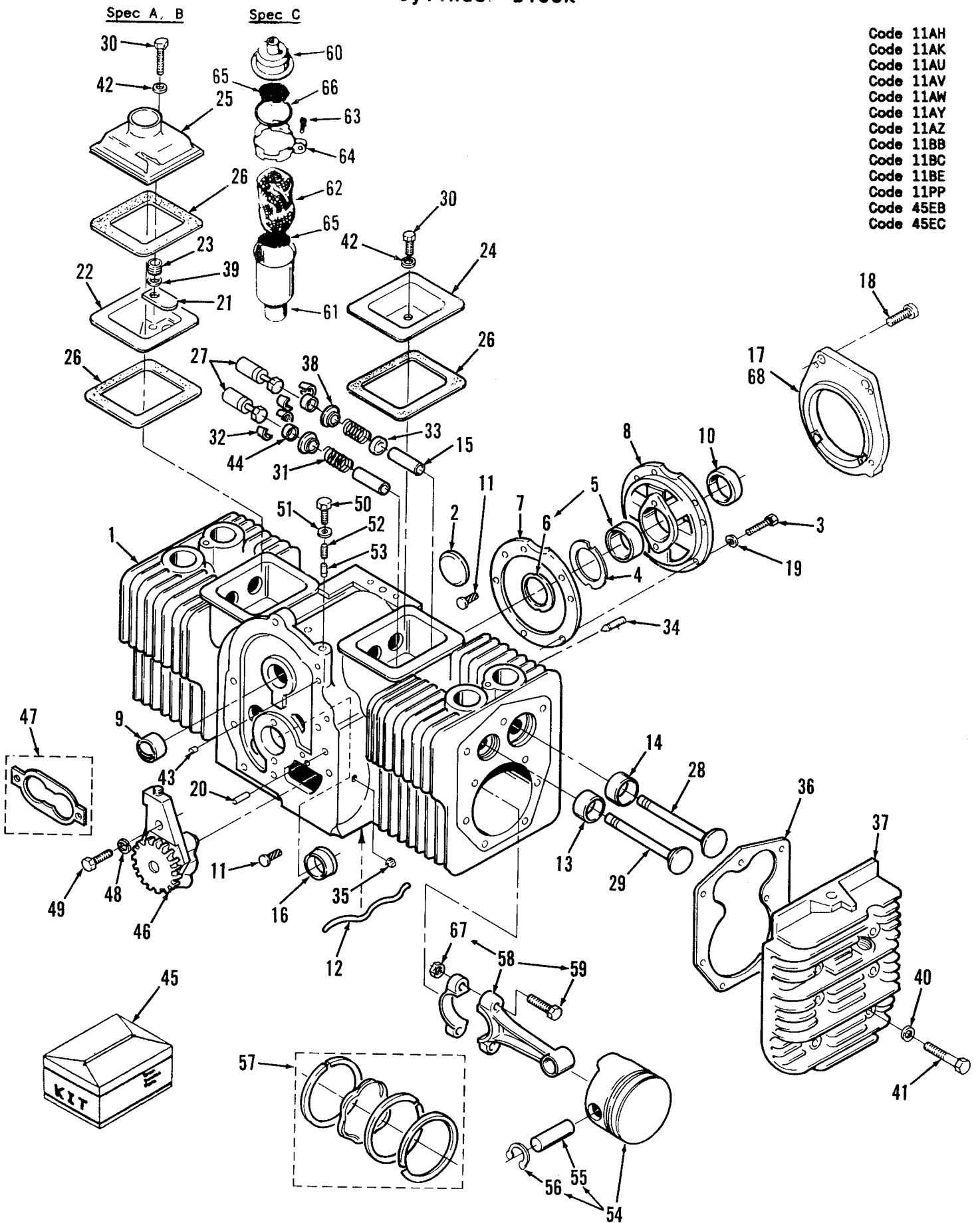


# Cylinder Block

Spec A, B

Spec C

Code 11AH  
 Code 11AK  
 Code 11AU  
 Code 11AV  
 Code 11AW  
 Code 11AY  
 Code 11AZ  
 Code 11BB  
 Code 11BC  
 Code 11BE  
 Code 11PP  
 Code 45EB  
 Code 45EC



## Cylinder Block

5620-0001	5620-0134	5620-0363-03
5620-0002	5620-0143	5620-0367
5620-0003	5620-0146	5620-0368
5620-0033	5620-0195	5620-0399-01
5620-0034	5620-0196	5620-0399-02
5620-0043	5620-0202	5620-0399-03
5620-0049	5620-0218	5620-0399-04
5620-0055	5620-0269	5620-0399-05
5620-0076	5620-0274	5620-0399-06
5620-0089	5620-0282	5620-0399-07
5620-0090	5620-0283	5620-0399-08
5620-0097	5620-0287	5620-0400-01
5620-0108	5620-0363-01	5620-0400-02
5620-0113	5620-0363-02	5620-0425

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1		1	Block, Cylinder (See Short Block Catalog #932-0109)	16			Bearing, Crankshaft - Front (Flanged)
2			Plug, Welch - Camshaft Opening (1-5/8")		101-0432	1	Standard
	517-0048	1	Non-Plated		101-0432-02	1	.002" Undersize
	517-0048-01	1	Zinc-Plated		101-0432-10	1	.010" Undersize
3			Screw, Cap - Hex Head (3/8-16 x 1-1/4") - Code 11AK, 11AU, 11AV		101-0432-20	1	.020" Undersize
	800-0051	5	Flanged Head (3/8-16 x 1-1/8") - Code 11AV, 11AW, 11AP	17	101-0432-30	1	.030" Undersize
	800-0575	5	Shim, Crankshaft End Play (.005")	18	101-0761	1	Adapter, Bearing Plate - Code 45BV
4	104-0776	AR	Bearing, Crankshaft - Rear (Includes Thrust Washer)		815-0682	4	Screw Socket Head (Special) - Code 45BV
5			Standard		800-0515	5	Cap, Hex Head (Special) - Code 45EC
	101-0450	1	.002" Undersize		800-0515	4	Cap, Hex Head (Special) - Code 11BE, 11AR
	101-0450-02	1	.010" Undersize	19			Washer
	101-0450-10	1	.020" Undersize		850-0050	5	Lock (3/8")
	101-0450-20	1	.030" Undersize		526-0251	5	Flat (3/8" Screw) Code 11AP, 11AV, 11AW
	101-0450-30	1	Washer, Thrust	20	516-0141	2	Pin, Alignment - Gear Cover
6	104-0575	2	Gasket, Bearing Plate	21	123-1175	1	Reed, Breather Valve - Specs A, B
7	101-0782	1	Plate, Bearing - Rear	22	123-1173	1	Baffle, Breather Valve - Specs A, B
8			Cadmium Plated	23	123-1174	1	Spring, Breather Valve - Specs A, B
	101-0439-01	1	4 Boss - Code 11AK	24			Cover, Valve - RH
	101-0551	1	SAE-A - Zinc Plated - Code 11AP		110-1879-01	1	Zinc-Plated - Code 11AH, 11AW, 11AU - Specs A, B
	101-0437-01	1	Bearing, Camshaft		110-3637-01	2	Begin Spec C - Zinc-Plated
9	101-0405	2	Seal, Oil - Crankshaft Rear	25	110-2274-01	1	Cover, Valve - LH - Specs A, B
10	509-0041	1	Pin, Drive - Bearing Stop				Zinc-Plated - Code 11AH, 11AW, 11AU
11	516-0072	4	Tube, Oil - Cylinder Block	26			Gasket, Valve Cover - Specs A, B
12	120-0735	1	Insert, Valve Seat - Exhaust		110-3709	3	Begin Spec C
13			Standard		110-3709	2	Tappet, Valve
	110-1824	2	.002" Oversize				Standard
	110-1824-02	2	.005" Oversize		115-0006	4	.002" Oversize
	110-1824-05	2	.010" Oversize		115-0006-02	4	.005" Oversize
	110-1824-10	2	.025" Oversize		115-0006-05	4	Valve, Intake
	110-1824-25	2	Insert, Valve Seat - Intake	27			Valve, Exhaust
14			Standard		115-0006	4	Code 11AV, 11AW
	110-0197	2	.002" Oversize		115-0006-02	4	Code 11AU
	110-0197-02	2	.005" Oversize	28	110-3479	2	Screw, Cap - Hex Head (1/4-20 x 1-3/4")
	110-0197-05	2	.010" Oversize	29			
	110-0197-10	2	.025" Oversize		110-3480	2	
	110-0197-25	2	Guide, Valve		110-3515	2	
15			Exhaust	30	800-0010	2	
	110-3527	2	Intake				
	110-3526	2					



## Cylinder Block

5620-0001	5620-0134	5620-0363-03
5620-0002	5620-0143	5620-0367
5620-0003	5620-0146	5620-0368
5620-0033	5620-0195	5620-0399-01
5620-0034	5620-0196	5620-0399-02
5620-0043	5620-0202	5620-0399-03
5620-0049	5620-0218	5620-0399-04
5620-0055	5620-0269	5620-0399-05
5620-0076	5620-0274	5620-0399-06
5620-0089	5620-0282	5620-0399-07
5620-0090	5620-0283	5620-0399-08
5620-0097	5620-0287	5620-0400-01
5620-0108	5620-0363-01	5620-0400-02
5620-0113	5620-0363-02	5620-0425

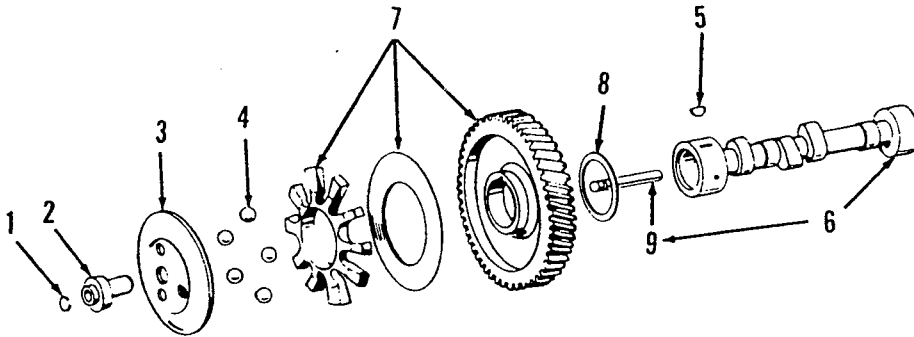
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
31	110-3485	4	Spring, Valve	55	112-0229	2	Pin, Piston
32	110-3511	8	Lock, Valve Spring	56	518-0311	4	Ring, Retaining
33	509-0289	2	Seal, Valve - Intake	57			Kit, Ring - Piston
34	803-0071	2	Screw, Socket - Set (3/8-16 x 5/8")		113-0189	2	Standard
35	505-0057	1	Plug, Pipe - Code 17CE		113-0189-05	2	.005" Oversize
36			Gasket, Cylinder Head		113-0189-10	2	.010" Oversize
	110-3181	2	Code 11AW, 11AZ, 11AV		113-0189-20	2	.020" Oversize
	110-2287	2	Code 11AU		113-0189-30	2	.030" Oversize
37			Head, Cylinder				Begin Spec D
	110-3509	1	Right Side		113-0310	2	Standard
	110-2564	1	Right Side - Code 23DZ		113-0310-05	2	.005" Oversize
	110-2563	1	Left Side - Code 23DZ		113-0310-01	2	.010" Oversize
	110-3508	1	Left Side		113-0310-02	2	.020" Oversize
38	110-3487	4	Washer, Valve Spring-Retg.		113-0310-03	2	.030" Oversize
39	526-0018	1	Washer, Flat (1/4" Screw)	58			Rod, Connecting (Includes
40	526-0122	18	Washer, Flat (5/16" Screw)				Bolt and Nut)
41	800-0571	18	Screw, Cap - Hex Head (Special) 2.0" Long		114-0300	2	P216 Standard
42	526-0063	2	Washer, Flat - Copper (1/4" Screw)		114-0300-10	2	.010" Undersize
43	517-0067	1	Plug, Core Hole - Specs A, B		114-0300-20	2	.020" Undersize
44	110-3510	4	Cap, Valve		114-0300-30	2	.030" Undersize
45			Kit, Gasket		114-0257	2	P218, P220 Standard
	168-0187	1	Engine, Complete		114-0257-10	2	.010" Undersize
	168-0189	1	Valve Grind/Carbon Removal		114-0257-20	2	.020" Undersize
46	120-0491	1	Pump, Oil (Components Not Sold Separately)		114-0257-30	2	.030" Undersize
47	120-0161	1	Gasket Kit, Oil Pump	59	114-0240	4	Bolt, Connecting Rod (Special)
48	740-1004	2	Washer, Flat (M6)	60	123-0954	1	Cap and Valve, Breather - Begin Spec C
49	800-0007	2	Screw, Cap - Hex Head (1/4-20x1")	61	123-0952	1	Tube, Breather - Begin Spec C
50	801-0049	1	Screw, Cap - Hex Head (3/8-24x7/8")	62	123-1417	1	Baffle, Breather Tube - Begin Spec C
51	526-0066	1	Washer, Flat - Copper (3/8" Screw)	63	809-0035	1	Screw, Tapping - Round Head (#8 x 3/4") - Begin Spec C
52	120-0140	1	Spring, Bypass Valve	64	123-0951	1	Clamp, Loop - Breather Tube Cap - Begin Spec C
53	120-0398	1	Plunger, Bypass Valve	65	123-0958	2	Screen, Breather Tube - Begin Spec C
54			Piston (Includes Pin and Retaining Rings)	66	509-0117	1	Seal, O-Ring - Breather Cap - Begin Spec C
	112-0186	2	Standard	67	870-0302	4	Nut, Hex - Crown Lock
	112-0186-05	2	.005" Oversize		517-0090	4	Plug, Plastic (Not Shown) Begin Spec C
	112-0186-10	2	.010" Oversize		517-0120	1	Plug, Breather Hole - Begin Spec C (Not Shown)
	112-0186-20	2	.020" Oversize		520-0820	2	Stud, Belt Guard Mounting Begin Spec C (Not Shown)
	112-0186-30	2	.030" Oversize				Adapter, Hydraulic Pump - Code 11BE, 11AR
	112-0264	2	*Spec D Standard	68	101-0766-01	1	Code 45EC
	112-0264-05	2	.005" Oversize		101-0766-02	1	
	112-0264-01	2	.010" Oversize				
	112-0264-02	2	.020" Oversize				
	112-0264-03	2	.030" Oversize				

\*Note: Piston 112-0264 Includes Ring Set.

## Camshaft

Code 13BG  
 Code 13BM  
 Code 13BN  
 Code 13BP  
 Code 13BR  
 Code 13BS  
 Code 13BT  
 Code 13BU  
 Code 13BV  
 Code 13BW  
 Code 13BY  
 Code 13BZ  
 Code 13CB  
 Code 13CE  
 Code 13CF  
 Code 13CH  
 Code 13CL  
 Code 13CM  
 Code 13CR

5620-0006  
 5620-0028  
 5620-0096  
 5620-0416  
 5620-0417

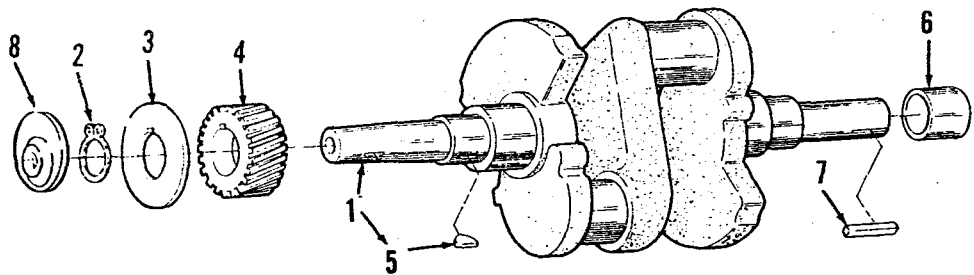


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining	6		1	Camshaft(Includes Center Pin)
2	150-1519	1	Hub, Governor Cup		105-0637	1	P216, P218
3	150-1520	1	Cup, Governor		105-0639	1	P220
4			Ball, Governor	7	105-0332	1	Gear, Camshaft
	510-0015	5	Codes 13BG,13BM,13BN,13BP, 13BR,13BS,13BT,13BV,13BW 13CB,13CE,13CM				(Includes Gear, Spacer and Plate)
	510-0015	10	Code 13CH (Use with 13CF)	8	105-0541	1	Washer, Thrust - Special
5	515-0001	1	Key, Woodruff - Camshaft Gear	9	150-0075	1	Pin, Center

# Crankshaft

Code 45BB  
Code 45BC  
Code 45BD  
Code 45BE  
Code 45BF  
Code 45BG  
Code 45BH  
Code 45BJ  
Code 45BL  
Code 45BP  
Code 45BS  
Code 45BT  
Code 45BU  
Code 45BW  
Code 45BY  
Code 45BZ  
Code 45CA  
Code 45CC  
Code 45CE  
Code 45EA

5620-0025  
5620-0040  
5620-0041  
5620-0051  
5620-0052  
5620-0056  
5620-0072  
5620-0083  
5620-0098  
5620-0109  
5620-0114  
5620-0115  
5620-0116  
5620-0117  
5620-0119  
5620-0120  
5620-0124  
5620-0135  
5620-0139  
5620-0141  
5620-0189  
5620-0190  
5620-0191  
5620-0192  
5620-0193  
5620-0194  
5620-0215-03  
5620-0309  
5620-0339  
5620-0345  
5620-0361  
5620-0422  
5620-0423  
5620-0424

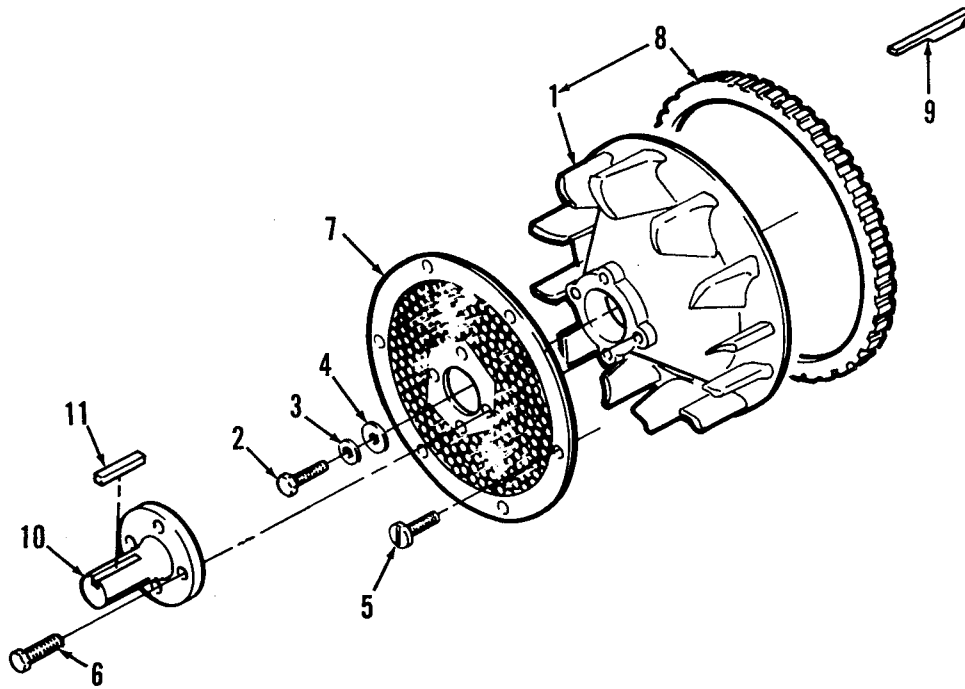


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Crankshaft <b>P216</b>	2	518-0014	1	Ring, Retaining
	104-1695	1	Code 45BB	3	104-0043	1	Washer, Gear Retaining - Special
	104-1332	1	Code 45BC	4	104-0032	1	Gear, Crankshaft
	104-1699	1	Code 45BD, 45BE, 45BW	5	515-0001	1	Key, Crankshaft Gear
	104-1331	1	Code 45BF	6	190-0267	1	Sleeve, Bearing - Code 45BP
	104-1621	1	Code 45BG	7			Key
	104-1535	1	Code 45BH		515-0198	1	Square (3/8x3/8x2-1/2") - Code 45BE, 45BW
	104-1333	1	Code 45BS		515-0103	1	Woodruff (1/4x1/4x2") - Code 45BW, Code 45BB
	104-0901	1	Code 45BT		515-0263	1	Woodruff (Kit) Code 23DZ
	104-0900	1	Code 45BU		515-0230	1	Code 45BD, 45BW
	104-1432	1	Code 45BZ	8	104-1712	1	Weight, Balance - Code 45BL
	104-1330	1	Code 45CA				
			<b>P218, P220</b>				
	104-1351	1	Code 45BB				
	104-1443	1	Code 45BC				
	104-1700	1	Code 45BD, 45BE				
	104-1348	1	Code 45BF				
	104-1693	1	Code 45BG				
	104-1502	1	Code 45BH				
	104-1735	1	Code 45BJ				
	104-1352	1	Code 45BP				
	104-1349	1	Code 45BS				
	104-1364	1	Code 45BT				
	104-1167	1	Code 45BU				
	104-1575	1	Code 45BY				
	104-1354	1	Code 45CA				
	104-0983-01	1	Code 45CC				
	104-1768	1	Code 45CE				
	104-1787	1	Code 45EA				

## Blower Wheel With Screen

Code 23DC  
Code 23EF

5620-0147  
5620-0148  
5620-0149  
5620-0299

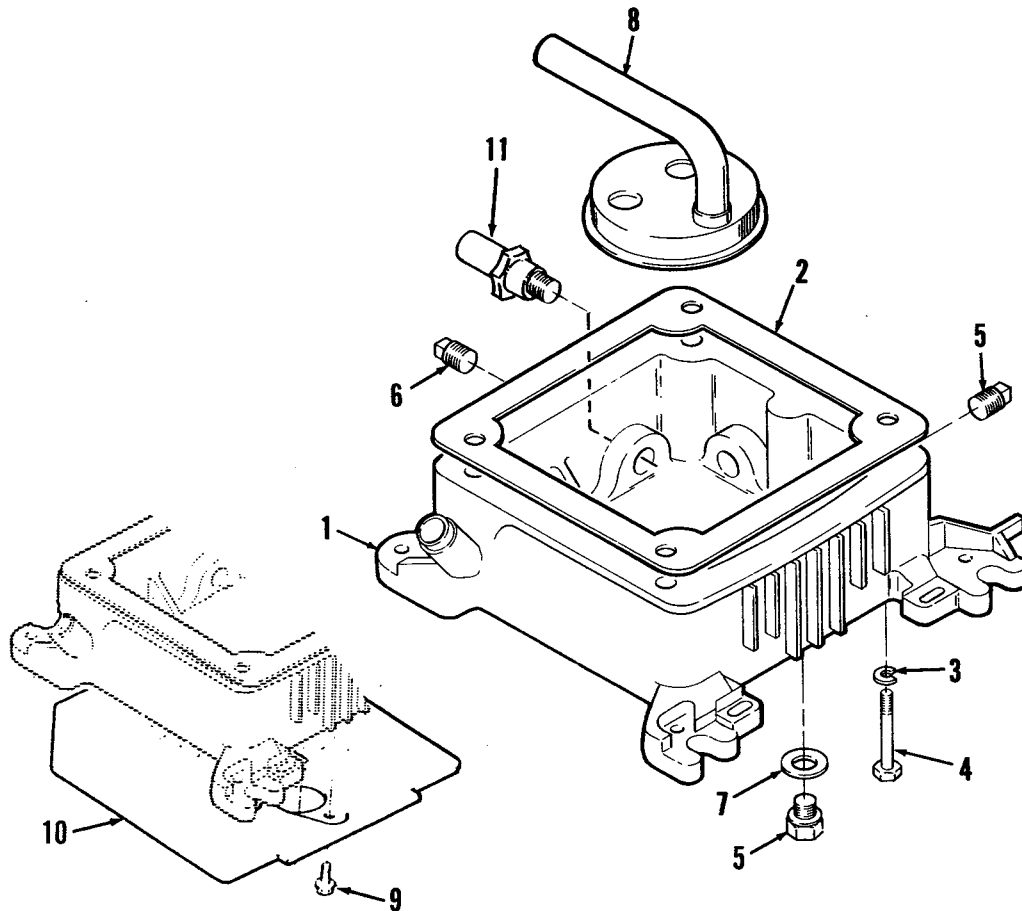


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Flywheel (Includes Ring Gear)	5	815-0687	6	Screw, Lock Head - Flange (#10-24 x 3/8")
	134-4632	1	20 Ampere - Code 31AZ, Spec A Only	6	821-0014	4	Screw, Cap - Hex Head Locking (5/16-18x1/2") - OEM Supplied On Code 45AZ
	134-4633	1	20 Ampere, 35 Ampere Begin Spec B - Code 31AZ, 31BC, 23DJ, 23DC, 23EF	7		1	Screen, Air Inlet Code 31AZ, 23DC - Painted
	134-4734	1	20 Ampere - Code 23DZ		134-3920	1	Code 23DZ
2	104-0170	1	Screw, Cap - Hex Head (Special)	8	104-0779	1	Gear, Ring
3	526-0356	1	Washer, Flat (7/16" Screw)	9	515-0284	1	Key, Flywheel
4	526-0017	1	Washer, Flat (7/16" Screw)	10	190-0687	1	Shaft, PTO - 1" Diameter
				11	515-0007	1	Key, Machine (1/4 x 2")

## Oil Base

Code 17BW  
Code 17CG  
Code 17CM  
Code 17DA  
Code 17DE

5620-0010  
5620-0050  
5620-0155-01  
5620-0155-02  
5620-0248-01  
5620-0291  
5620-0408



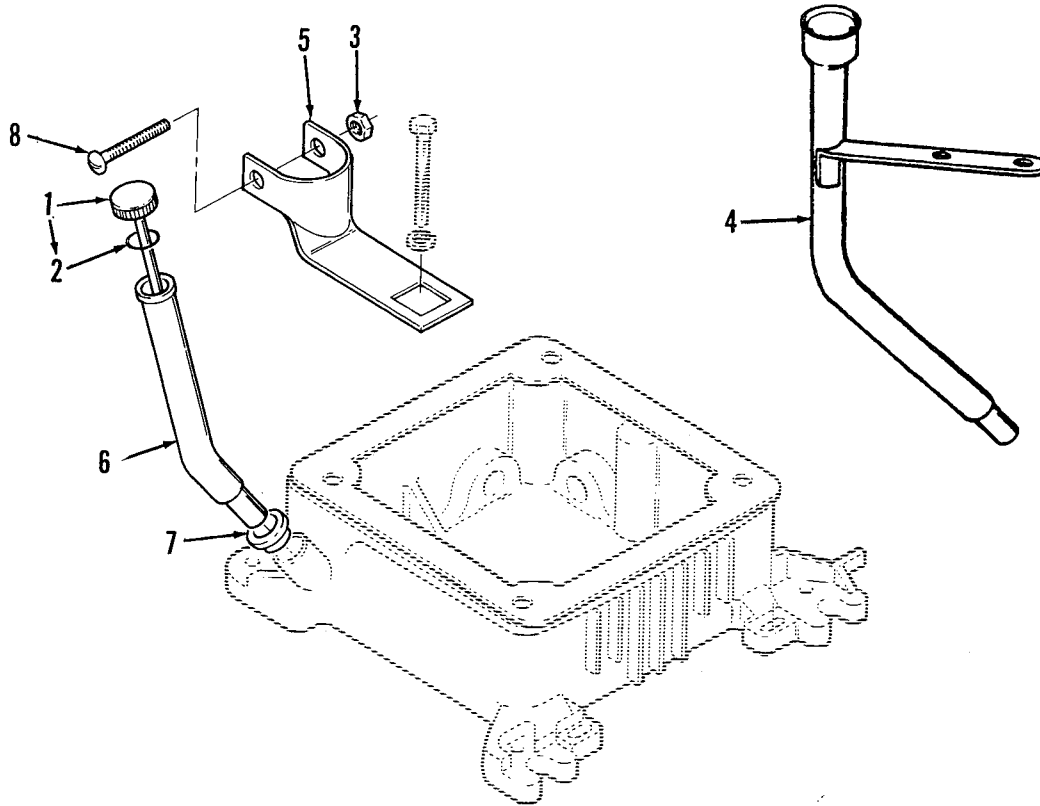
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Base, Oil (Includes All Plugs and Plug Gasket)	6		2	Plug, Square Head (3/8") -
	102-1325	1	Code 17BW,17CG,17DE		505-0110	1	Code 17DE, 17CM
	102-1338	1	Code 17CM - 2.5 Quart Multi Drain	7	102-0743	1	Gasket, Hex Head Plug -
	102-1384	1	Code 17DA				Code 17CM,17DA,17DE
	102-0850	1	Code 23DZ	8		1	Cup, Intake - Oil Pump
2	102-1387	1	Gasket, Oil Base		120-0713	1	Code 17BW,17CG,23DZ,17DE
3	526-0251	4	Washer, Flat (3/8" Screw)		120-1215	1	Code 17CM
4			Screw, Cap - Hex Head		120-1230	1	Code 17DA
	800-0061	4	(3/8-16 x 3-3/4")	9	815-0340	2	Screw, Hex Washer Head
			Code 17BW,17CG,17DE				(10-32 x 3/8") - Code 23DV
	800-0200	4	(3/8-16 x 5-3/4")	10	134-3864-50	1	Baffle, Oil Base - Painted -
			Code 17CM				Code 23DV
	800-0302	4	(3/8-16 x 5-1/2")	11	309-0625	1	Switch, Oil Temperature -
			Code 17DA				Open 345° - Code 17DE
5	102-0938	1	Plug, Hex Head - Special -				
			Code 17CM,17DA,17DE				



## Oil Fill Tube And Bracket

Code 17BY  
Code 17BZ  
Code 17CF  
Code 17CH  
Code 17CN  
Code 17CR

5620-0012  
5620-0037-02  
5620-0037-03  
5620-0037-04  
5620-0087  
5620-0093  
5620-0207  
5620-0293  
5620-0337

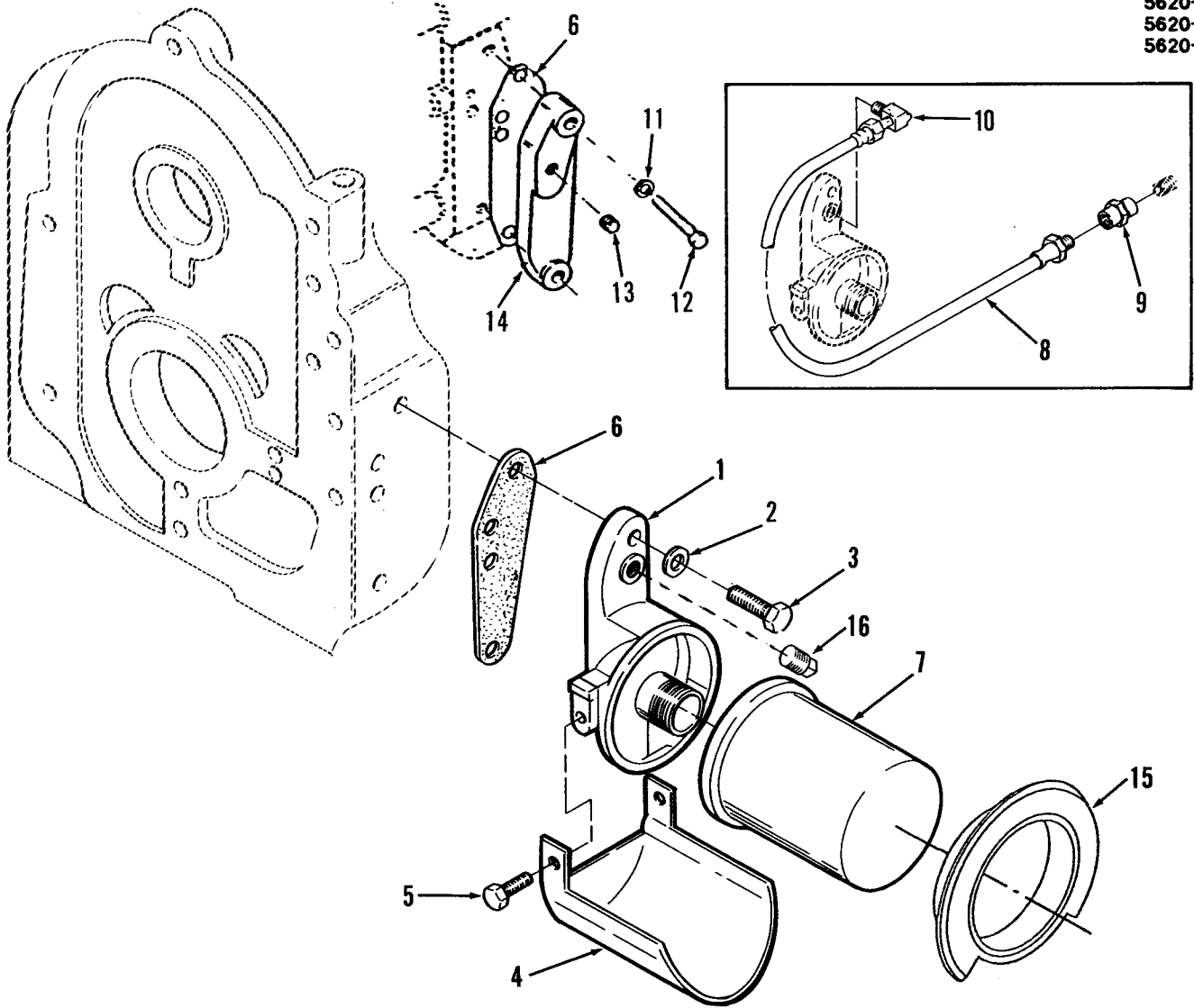


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Cap and Indicator, Oil Fill (Includes O-Ring)	5			Bracket, Fill Tube
	123-1851	1	Code 17BY-Use with Code 17CM		123-1863-02	1	Zinc Plated - Code 17BY
	123-1637	1	Code 17BY-1.75 Quart Capacity Dipstick Specifies Pints - 16.27" Long		123-1752	1	Unplated - Code 17BZ, 17CH, 17CR
	123-1880	1	P220 - Code 17BZ - Use with Code 17DA		123-1865-51	1	Painted Black - Use with Outer Extended Tubes - Codes 17BZ, 17CH
	123-1630	1	Code 17CH		123-1863-51	1	Painted Black - Use with Inner Extended Tubes - Codes 17BY, 17CG
	123-1402	1	Code 17BZ-Use With Code 17CG		123-1867-51	1	Painted - Code 17BZ
	123-1849	1	Code 17BZ-Use With Code 17CM	6			Tube, Oil Fill
	123-1754	1	Code 17CF		123-1685-50	1	15.75" Long - Painted - Code 17CN, 17BY
	123-1850	1	Code 17CF-Use With Code 17CM		123-1718-50	1	13.75" Long - Outer, Short - Painted - Code 17BZ, 17CH, 17CR
	123-1849	1	P218 - Code 17BZ-Use with Code 17CM		123-1729-50	1	15.72" Long - Code 17CF - Painted
	123-1292	1	Code 23DZ	7	509-0269	1	Seal, Oil Fill Tube
	123-1851	1	Code 17BY - 1.75 Quart Capacity Dipstick Specifies Quarts - 18.3" Long	8			Screw
	123-1860	1	18,20 HP - Code 17CF - Begin Spec C		815-0576	1	Pan Head (#10 x 1-1/4")
2	509-0142	1	O-Ring, Oil Fill Cap		815-0760	1	Self-Tapping - Use with Extended Tubes
3	870-0410	1	Nut, Speed (Type U)				
4	123-1896-51	1	Tube, Oil Fill - Includes Bracket - Code 17CF				

# Oil Filter

Code 17CD  
Code 17CE  
Code 17CV

5620-0102-02  
5620-0102-07  
5620-0102-08  
5620-0102-09  
5620-0146  
5620-0261  
5620-0264

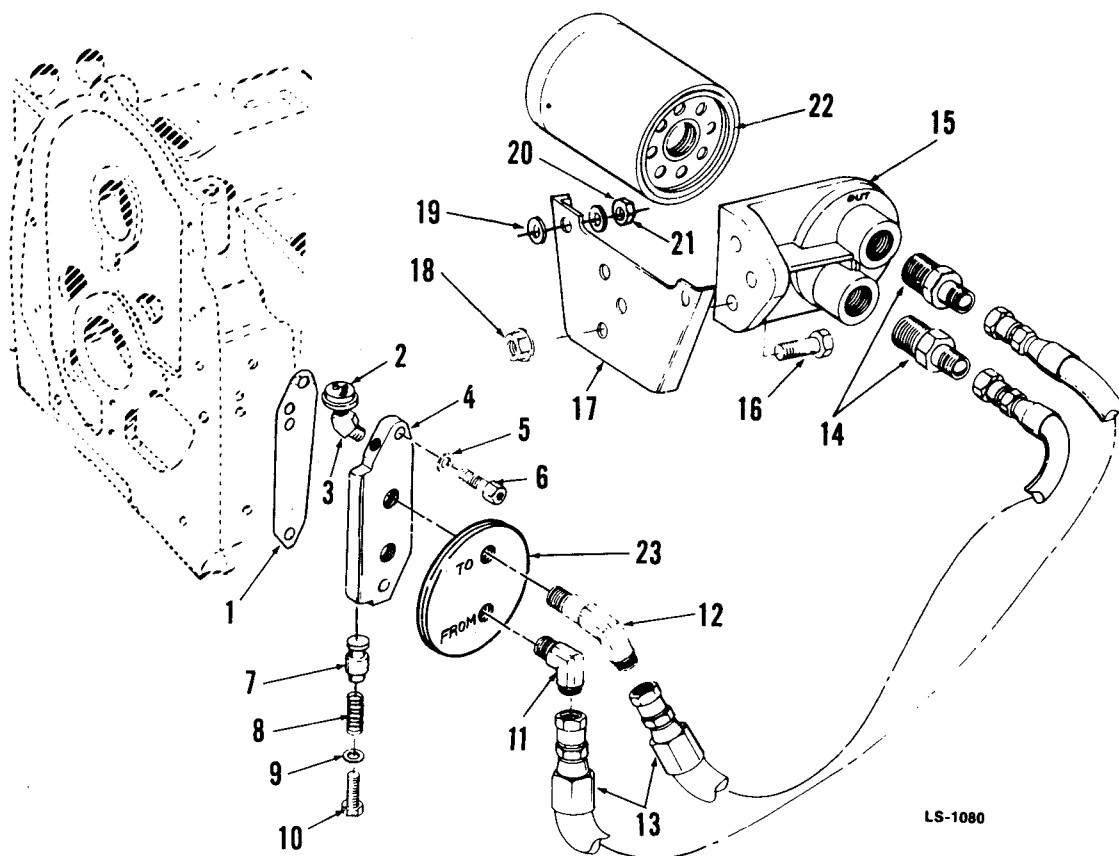


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0320	1	Adapter, Oil Filter	8	501-0008	1	Line, Flex
2	526-0065	2	Washer, Flat - Copper (5/16" Screw)	9	502-0017	1	Connector
3	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")	10	502-0020	1	Elbow, Street 90°
4			Drain, Oil Filter	11	526-0065	2	Washer, Flat - Copper (5/16" Screw)
	122-0360	1	Unpainted	12	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")
	122-0360-50	1	Painted	13	505-0274	1	Plug, Countersunk (1/8")
5	815-0194	2	Screw, Cap - Hex Head W/ET (#10-32 x 3/8")	14	122-0438	1	Cover, Oil Filter Pad - Code 11AZ,17CE
6	122-0771	1	Gasket, Oil Filter Adapter	15	122-0502	1	Gasket, Oil Filter - Code 17CD,17CV
7			Filter, Oil	16	505-0057	1	Plug, Square Head (1/8") Units without Lopko Switch
	122-0645	1	With-Out Hex Nut Code 17CD (3-1/2" Long)				
	122-0323	1	Without Hex Nut - Code 17CD (4-3/16" Long)				
	122-0469	1	With Hex Nut - Code 17CV (4.64" Long)				

# Remote Oil Filter

Code 17AS  
Code 17CJ  
Code 17CK

5620-0030

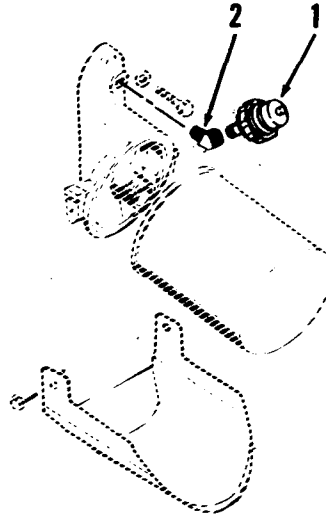


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0774	1	Gasket, Oil Filter Adapter	13			Hose, Oil
2	309-0105	1	Switch, Low Oil Pressure	14	502-0804	2	Specs A, B - Code 17CJ
	309-0546	1	2 Terminal, Normally Open - Code 17CK	15	122-0476	2	Begin Spec C - Code 17CJ
	309-0510	1	1 Terminal, Normally Closed - Code 17AS	16	800-0027	2	Connector, Male - Code 17CJ
3	502-0053	1	1 Terminal, Normally Closed - Code 17CJ	17	122-0559	1	Base, Remote Oil Filter - Code 17CJ
	505-0049	1	Elbow, Street	18	870-0257	3	Screw, Cap - Hex Head (5/16-18 x 7/8")
4	122-0369	1	45° - Code 17AS, 17CJ	19	526-0030	2	Bracket, Remote Oil Filter - Code 17CJ
5	526-0065	2	90° - Code 17CK	20	526-0174	2	Nut, Self-Lock (5/16-18")
6	802-0056	2	Adapter, Oil Filter	21	862-0003	2	Washer, Flat (3/8" Screw)
7	120-0398	1	Washer, Flat - Copper (5/16" Screw)	22	122-0469	1	Washer, Flat (13/32" ID x 25/32" OD x .1345 Thk)
8	120-0140	1	Screw, Cap - Socket Head (5/16-18 x 1-1/4")	23		1	Nut, Hex (5/16-18")
9	526-0066	1	Plunger, Bypass Valve		508-0249	1	Filter, Oil - Code 17CJ
10	801-0047	1	Spring, Bypass		508-0273	1	Grommet, Air Seal
			Washer, Flat (3/8" Screw)		505-0057	1	Units without Oil Lines
11	502-0805	1	Screw, Cap - Hex Head (3/8-24" x 5/8")			1	Units with Oil Lines
12	502-0806	1	Elbow, Male (From Filter) 90°			1	Plug, Square Head - Units Without Lopko Switch (Not Shown)
			Elbow, Male (To Filter) 90°				

## Low Oil Pressure Cut-Off Switch

Code 35AU  
Code 35AV  
Code 35BW

5620-0030  
5620-0102  
5620-0112

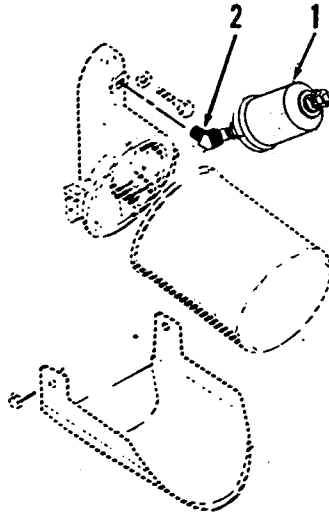


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	309-0546	1	Switch, Low Oil Pressure 1 Terminal - Code 35AU Normally Closed - 2.01" Long	2	502-0053	1	Elbow, Street - 45° Code 35AV, 35BW
	309-0510	1	1 Terminal - Code 35AU Normally Closed - 1.71" Long				
	309-0105	1	2 Terminal - Code 35AV Normally Open - 1.87" Long				
	309-0558	1	2 Terminal - Code 35BW - Begin Spec C - Normally Open - 2" Long				

# Oil Pressure Sender - 40 P.S.I.

Code 35BA

5620-0264

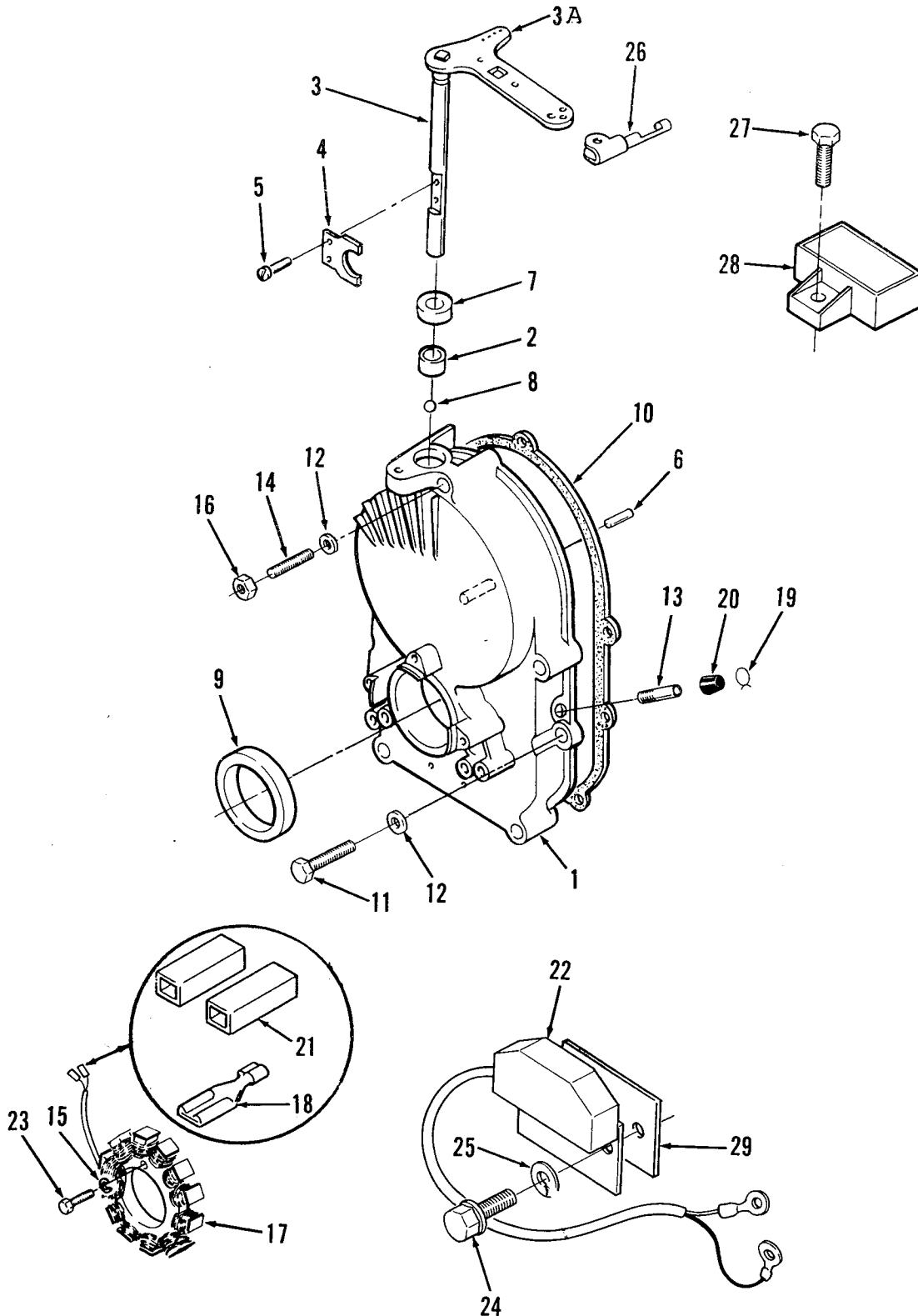


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	193-0389	1	Sender, Oil Pressure Gauge - 40 P.S.I.	2	502-0053	1	Elbow, Street - 45°



# Gearcase, Ignition Control, Alternator And Regulator

Code 31AZ  
Code 31BC  
Code 31BD  
Code 31BJ



5620-0005  
 5620-0042  
 5620-0077  
 5620-0183  
 5620-0318

**Gearcase, Ignition Control, Alternator  
 And Regulator**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Gearcase (Kit)	16	862-0015	1	Nut, Hex (5/16-18)
			(Includes Parts Marked*)	17			Stator (Includes Terminals)
	103-0791	1	Specs A, B		191-1276	1	35 Ampere
	103-0799	1	Begin Spec C		191-1256	1	20 Ampere
2	510-0105	1	*Bearing, Governor Shaft	18	332-2423	3	Terminal, Stator Leads
3			*Shaft and Arm, Governor				Code 31AZ, 47AW - Use Qty. 2
	150-1470	1	Non-Hardened	19	503-0301	1	*Clamp, Vacuum Port Cap
	150-1470-01	1	Case Hardened	20	149-1321	1	*Cap, Vacuum Port
	150-1422	1	Code 31AZ, Begin Spec C	21	323-1257	2	Body, Terminal Connector
3A	150-1007	1	Arm, Governor Spec A,B				Kit (Includes Terminals)
4	150-1187	1	*Yoke, Governor Shaft				Code 31AZ
5	815-0046	2	*Screw, Machine - Pan Head (8-32 x 3/8")	22	166-0785	1	Control, Ignition
6	516-0130	1	*Pin, Dowel - Governor Cup Stop	23	815-0172	3	Screw, Machine - Hex Head Self-Lock (#10-32x1") Code 31AZ
7	509-0008	1	*Seal, Oil - Governor Shaft	24	815-0340	2	Screw, Hex Washer Head (10-32x3/8")
8	510-0014	1	*Ball, Bearing - Governor Shaft	25	854-0010	2	Washer, Lock - IT (#10)
9	509-0040	1	*Seal, Oil - Crankshaft	26	518-0406	1	Clip, Retaining - Control Rod To Governor Shaft
10	103-0810	1	Gasket, Gearcase Mounting				Screw, Cap - Hex Washer Head (1/4-20x5/16")
11	800-0032	4	Screw, Cap - Hex Head (5/16-18 x 1-3/4")	27	821-0008	1	Regulator, Voltage
12	526-0065	5	Washer, Flat - Copper (5/16" Screw)	28			35 Ampere - Code 318C
13	149-1299	1	*Tube, Vacuum Port (1.5" Long)		191-1847	1	20 Ampere - Code 23DK, 31AZ, 23EH
14	520-0933	1	Stud, Gear Cover		191-1748	1	Insulator, Ignition - Module
15	850-0030	3	Washer, Lock (#10) - Code 31AZ	29	166-0786	1	

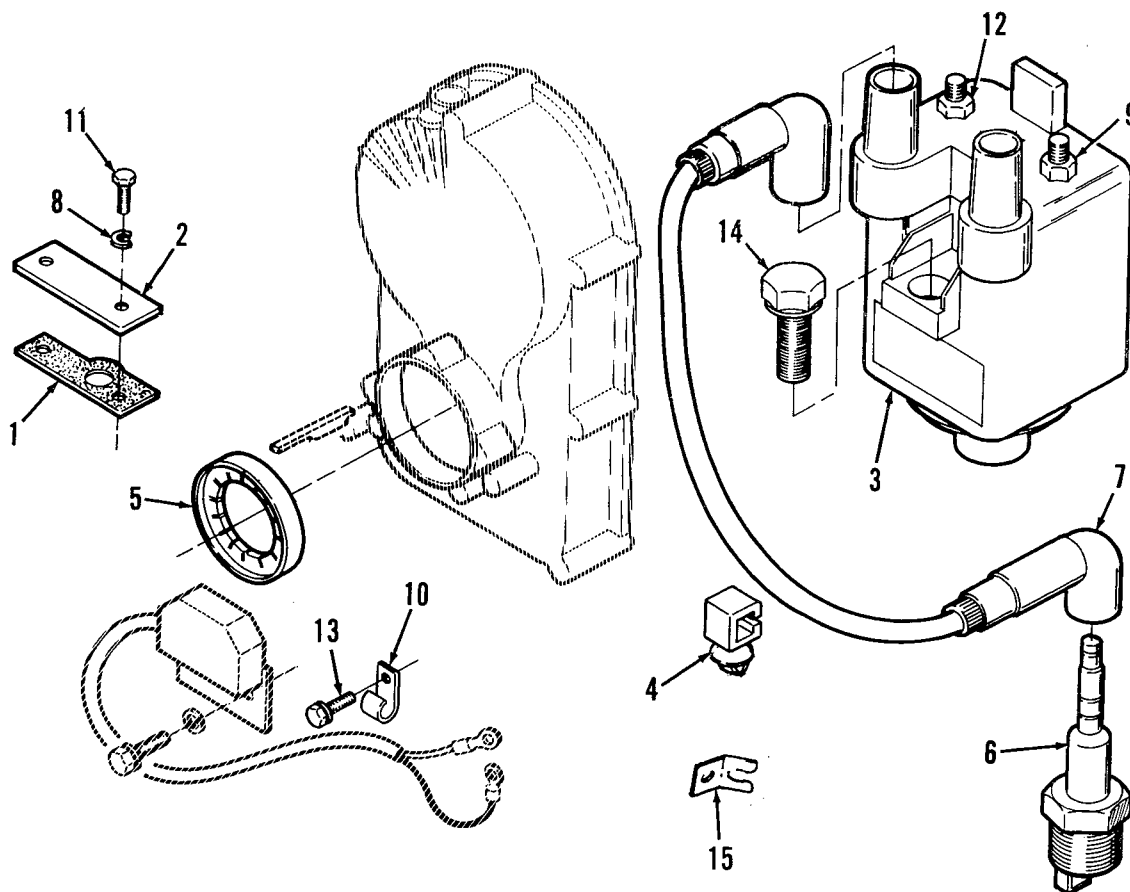
\* - Parts Included in Gearcase.



# Ignition - Electronic

Code 31AY

5620-0018  
5620-0157  
5620-0158  
5620-0312



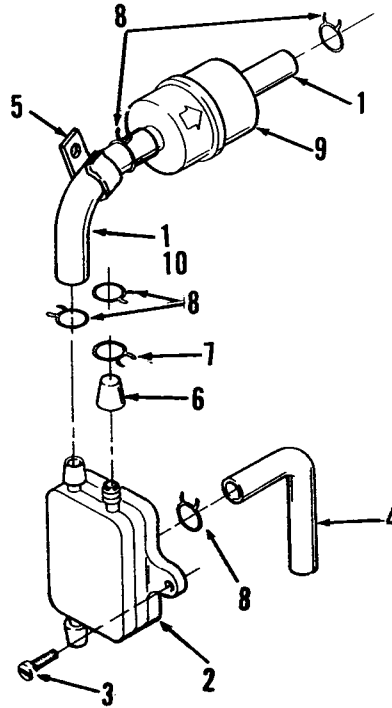
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	160-1368	1	Gasket, Plate
2	160-1345-01	1	Plate, Ignition Plunger Cover - Zinc Plated
3	166-0761	1	Coil, Battery Ignition (Includes Nuts)
4	332-2904	1	Clip, Wire (Attach To #1 Spark Plug Wire)
5	166-0767	1	Rotor, Ignition
6	167-0263	2	Plug, Spark
7	167-1602	2	Cable, Spark Plug
8	740-1004	2	Washer, Flat (M6)
9	166-0770	1	Nut, Hex Flange (M4 Positive Terminal)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10	518-0515	2	Clip, Wire
11	800-0004	2	Screw, Cap Hex Head (1/4-20 x 5/8")
12	166-0771	1	Nut, Hex Flange (M5 Negative Terminal)
13	815-0389	1	Screw, Hex Washer Head (1/4-20 x 1")
14	815-0650	2	Screw, Hex Washer Head (1/4-20 x 1")
15	167-0218	1	Support, Cable - Hi Tension Code 23DZ

## Fuel Pump And Filter

Code 15AZ  
Code 15BA  
Code 15BB  
Code 15BC  
Code 15BL  
Code 15BM  
Code 15BR  
Code 15BZ

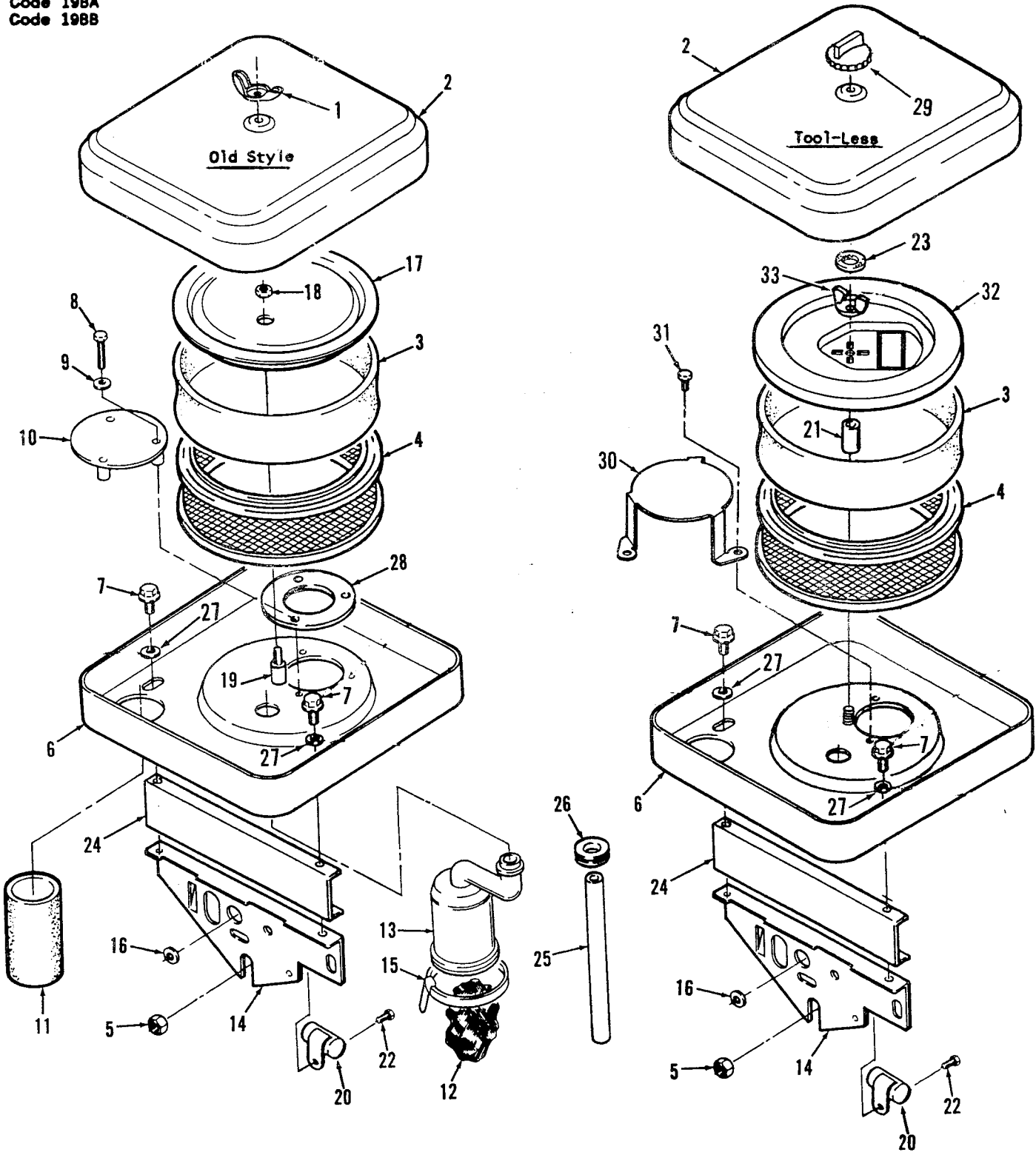
5620-0008  
5620-0029  
5620-0235  
5620-0246  
5620-0312  
5620-0333



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0707	1	Hose - 12" (Cut to Appropriate Length)	5	518-0515	1	Clip, Wire - Code 15BZ, 15AZ, 15BL, 13CD
2	149-1982	1	Pump, Fuel - Vacuum	6	149-1321	1	Cap, Fuel Fitting
	149-2187-02	1	3 Open Ports - Bottom Inlet	7	503-0301	1	Code 15AZ, 15BA, 15BL, 15BM
	149-2187-02	1	2 Open Ports - Top Inlet	7	503-0301	1	Clamp, Hose - Code 15AZ, 15BA, 15BL, 15BM
3	815-0555	2	Screw, Tapping - Pan Head (10-24 x 5/8") Code 15AZ, 15BA, 15BL, 15BM	8	503-0731	6	Clamp, Hose (1/2")
4	503-0707	1	Line, Pulse (Cut to 7" Long) Code 15AZ, 15BA, 15BL, 15BM, 13BJ (Cut to 5-1/8" Long - Code 23DZ)	9	149-2206-02	1	Filter, Fuel
					149-2206-01	1	Code 15BZ
				10	503-1199	1	Code 23DZ, 15BA, 15BL, 15BB, 15BZ
							Hose - 24" (Cut to 20-3/4" Long) Code 23DZ, 15BZ, 15BD, 15BL

# Air Cleaner

Code 19AS  
Code 19AU  
Code 19AW  
Code 19BA  
Code 19BB



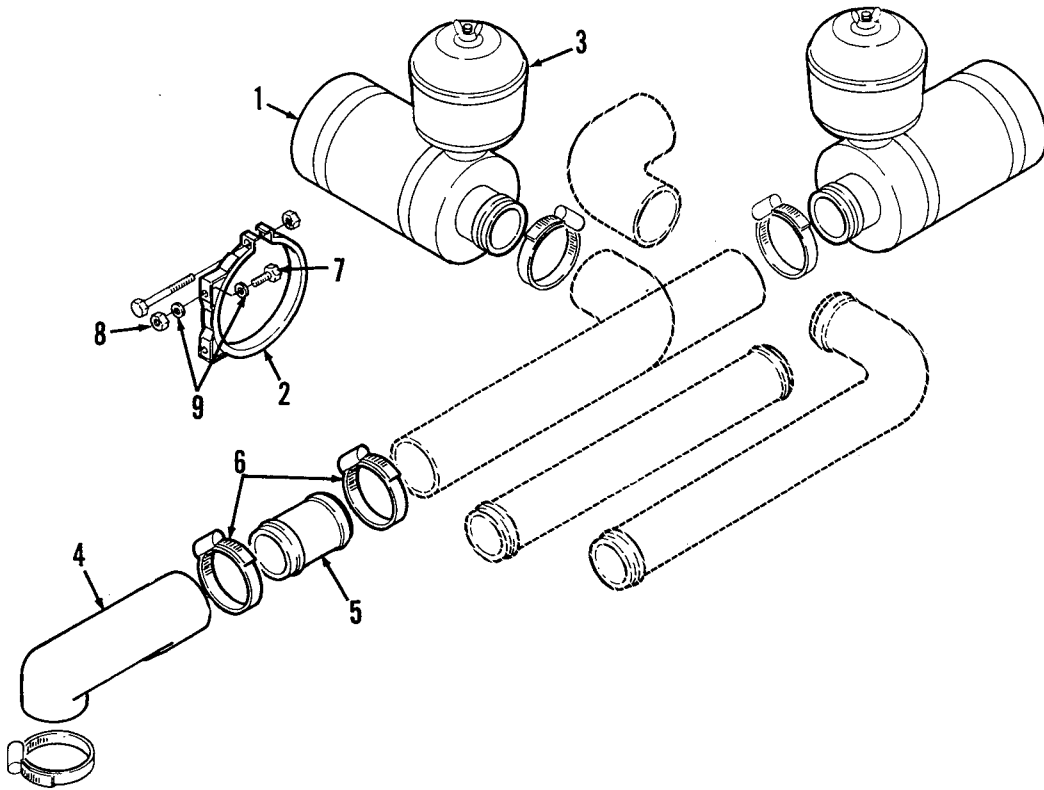
## Air Cleaner

5620-0013  
 5620-0031-01  
 5620-0034  
 5620-0100  
 5620-0161-01  
 5620-0161-03  
 5620-0204  
 5620-0233

5620-0235  
 5620-0277-04  
 5620-0364-01  
 5620-0364-02  
 5620-0364-64  
 5620-0365-03

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	865-0020	1	Nut, Wing (1/4-20)	12	123-1417	1	Filter, Breather Tube - Specs A, B
2			Cover, Air Cleaner	13	123-1429	1	Tube, Crankcase Breather - Specs A, B
	140-2005-50	1	Painted - Code 19AS,19AW, 19BA	14	140-2017-50	1	Support, Air Cleaner - Painted
	140-2005-02	1	Chromed - Code 15BD,15CL	15	503-1752	1	Clamp, Breather Tube - Spec A,B
	140-1913-50	1	Painted - Code 19AU	16	508-0021	1	Grommet, Rubber (3/4" Hole)
3			Wrapper, Air Cleaner Element	17	140-1692	1	Cover, Element
	140-1496	1	Standard Svc and XSL Code 19AS,19BA	18	870-0365	1	Nut, Hex (1/4-20)
	140-1912	1	High Capacity - Code 19AU	19	301-0458	1	Spacer, Air Cleaner Stud
4			Element, Air Cleaner	20	312-0256	1	Capacitor (Placed Horizontal)
	140-2522	1	Standard Capacity - Code 19AS,19AW,19BA	21		1	Spacer, Air Cleaner Stud
	140-2523	1	High Capacity - Code 19AU		140-2536-01	1	1" Long - Standard
5	870-0399	1	Nut, Hex Washer Head Flanged (5/16-18)	22	140-2536-02	1	2-3/4" Long - High Capacity
6			Housing, Air Cleaner	23	815-0178	1	Screw, Hex Washer Head - Thread Form (10-32 x 5/8")
	140-2493-53	1	Code 19AS,19AW - Begin Spec C - Use with Standard Filter	24	140-2536-03	1	Spacer, Rubber
	140-2493-51	1	Code 19AS,19AW - Spec A,B - Use with Standard Filter	25	140-2202-02	1	Spacer, Air Cleaner - LP Gas - Painted
	140-2539-53	1	Code 19AU - Begin Spec C - Use with High Capacity Filter	26	123-1484-01	1	Tube, Breather (Copper) LP Gas
	140-2539-51	1	Code 19AU - Spec A,B - Use with High Capacity Filter	27	508-0021	1	Grommet, Rubber (1/2" ID) LP Gas
	140-2493-54	1	Code 19BA - Begin Spec C - Use with Standard Filter	28	526-0018	2	Washer, Flat (1/4" Screw) LP Gas
7			Screw	29	140-2278	1	Plate, Support - Dual Fuel Units
	815-0575	2	Tapping - Hex Washer Head (1/4-20 x 3/8") Gasoline		140-2204	1	Gasket, Hose Fittin - Code 19BA - Not Shown
	800-0011	2	Hex Head - Cap (1/4-20 x 2") LP Gas	30	870-0346	1	Nut, 6 Point - Self-Lock (1/4-28) Code 19BA - Not Shown
8			Screw, Hex Head - Machine Gasoline Fuel (#10-32 x 1-1/2")	29	140-2537	1	Knob (1/4-20)
	815-0470	2	LP Gas - Dual Fuel Units (#10-32 x 2-1/4")	30	145-0614	1	Plate, Air Deflector - High Capacity - Gasoline Units Code 19AU
	815-0516	3	Washer, Flat (#10 Screw)	31	815-0463	3	Screw, Slotted - Hex Washer Head (#10-32 x 3/8")
9	526-0234	3	Plate, Air Deflector - Gasoline Units	32	140-2441	1	Cover, Element - Code 19AS,19AU
10	145-0521	1	Tube, Air Intake	33	865-0029	1	Nut, Wing (1/4-20)
11			5.12" Long - Dual Fuel Units				
	140-2025-02	1	Gasoline Units - 3.5" Long				
	140-2025	1					

## Remote Air Cleaner

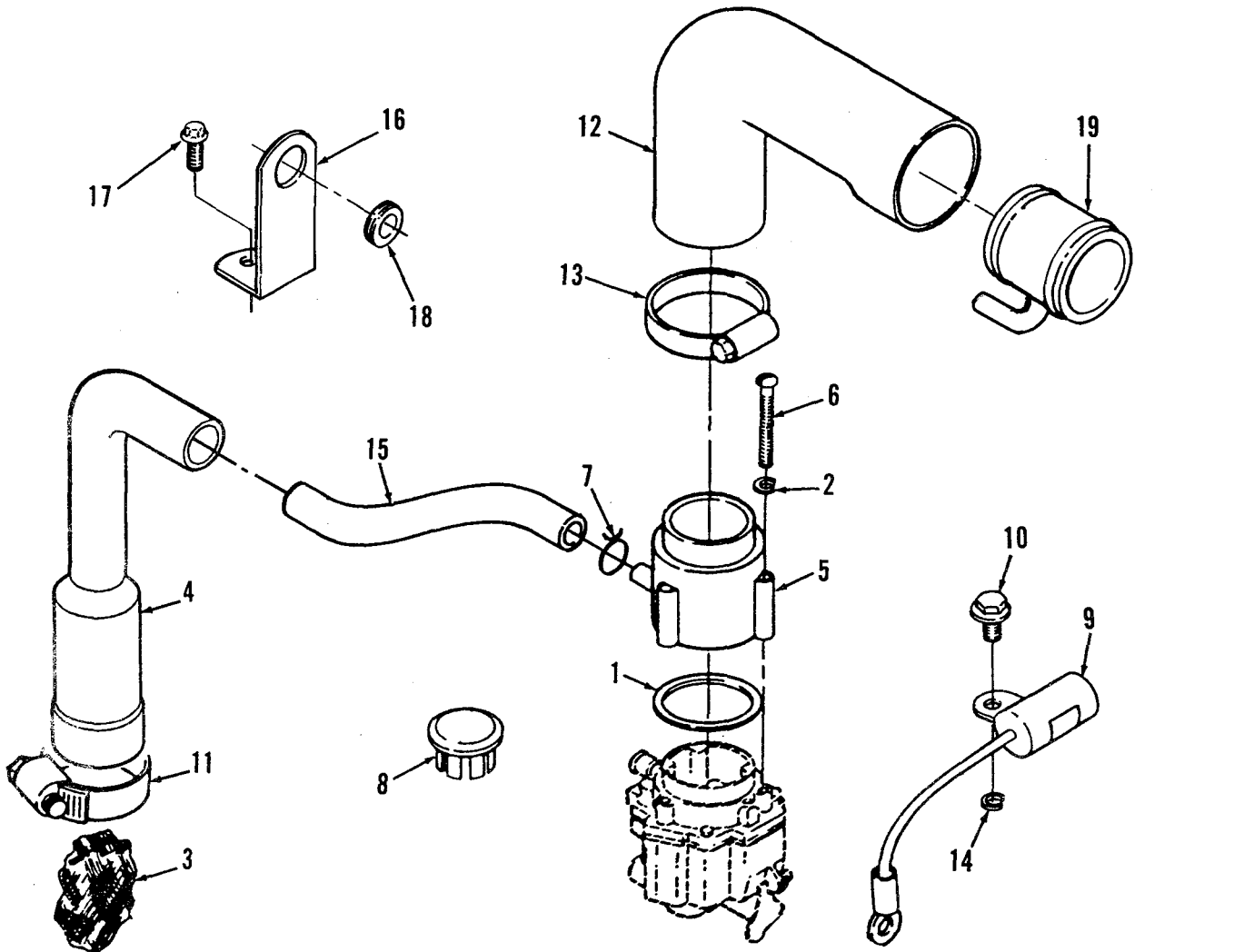


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-0721	1	Cleaner, Air (Includes Element #140-0765)	5	140-2173	1	Tube, Air Induction (Steel)
2	140-0722	2	Band, Air Cleaner	6	503-1141	4	Clamp, Hose (2-3/8" Dia.)
3	140-0723	1	Pre-Cleaner, Air Cleaner (Plastic)	7	800-0004	4	Screw, Hex Head Cap (1/4-20 x 5/8")
4	140-1428	1	Elbow, Air Inlet	8	870-0065	4	Nut, Self-Lock (1/4-20)
				9	526-0018	8	Washer, Flat (1/4" Screw)

## Remote Air Cleaner Adapter

Code 19AV  
Code 19CK

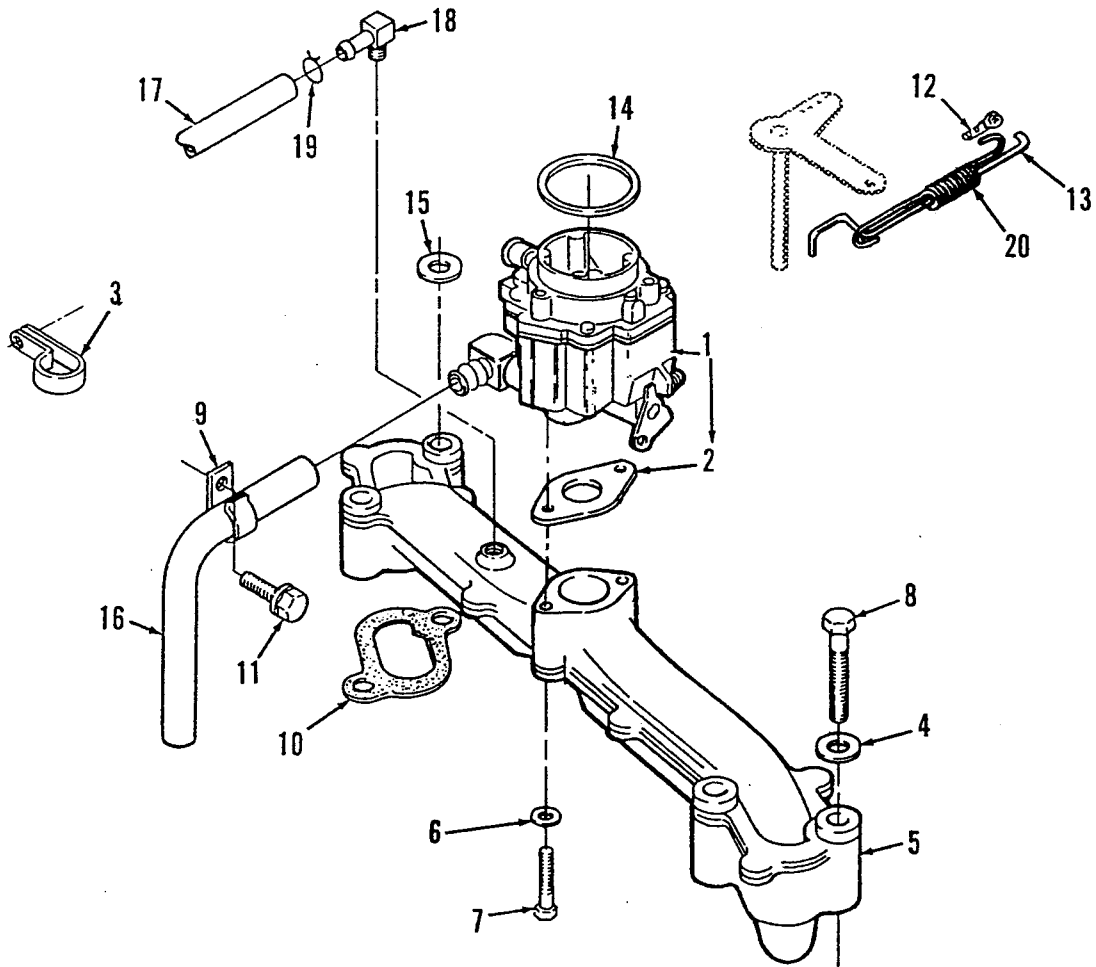
5620-0078  
5620-0277-04  
5620-0277-71



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	509-0145	1	Seal, O-Ring	9	312-0256	1	Capacitor
2	850-0030	3	Washer, Lock - Spring (#10)	10	815-0389	1	Screw, Hex Washer Head (1/4-20 x 3/8")
3	123-1417	1	Filter, Breather Tube	11	503-0107	1	Clamp, Breather Tube (1-5/8" Diameter)
4	123-1539	1	Tube, Crankcase Breather	12	140-1428	1	Elbow, Air Inlet
5	140-1714	1	Adapter, Carburetor Air Intake	13	503-1142	3	Clamp, Hose 1.81-2.75" - P220 - Code 19CK
6	813-0106	3	Screw, Machine - Round Head (#10-32 x 1-1/8")		503-1141	1	1.56 - 2.5" - Code 19AV
7	503-0171	1	Clamp, Hose (11/16" Dia.) Spec A,B	14	853-0013	1	Washer, Lock - ET (1/4")
	503-0171	2	Begin Spec C	15	503-1396	1	Hose, Breather
8	517-0252	1	Plug, Dot Button - Blower Housing Air Hole Unplated	16	149-2242	1	Bracket, Fuel Line - P218, P220 - Begin Spec C
	517-0174	1	Tapered	17	815-0261	1	Screw, Hex Washer Head (1/4-20 x 1/2")
				18	508-0021	1	Grommet, Rubber - P218, P220 - Begin Spec C
				19	140-2668-01	1	Tube, Air Induction - P220 - Code 19CK

# Fuel System Gasoline (Down Draft)

Code 15BD  
Code 15BR  
Code 15BU  
Code 15CJ  
Code 15CL  
Code 19BC



## Fuel System Gasoline (Down Draft)

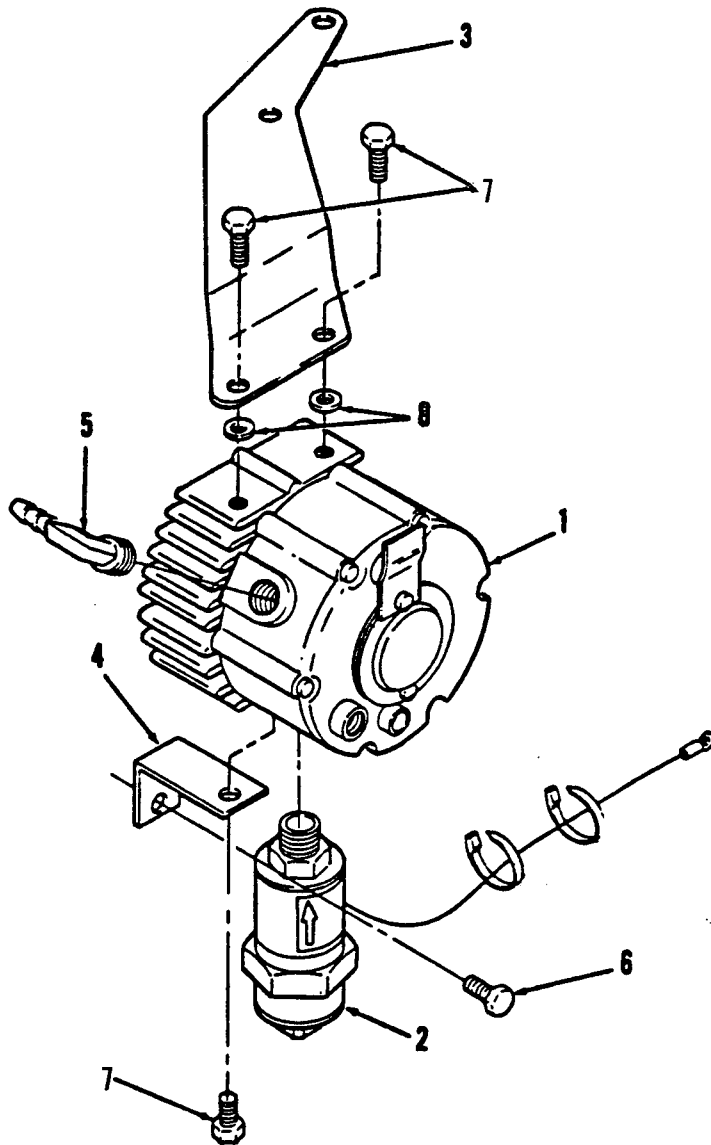
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5620-0162

5620-0206  
5620-0234-01  
5620-0278  
5620-0279  
5620-0347  
5620-0387  
5620-0409  
5620-0413-01

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Carburetor, Complete (Includes Mounting Gasket, Elbow and O-Ring) (See Separate Page for Components)	13			Rod, Governor Control Zinc Plated - P216, P220
	146-0495	1	P216, P218		150-2460	1	P218
	146-0496	1	P220		150-2364	1	P218 - Code 15CL/P216 - Code 15BD
	146-0506	1	Automatic Choke - P220 - P218 Code 15CL	14	509-0145	1	O-Ring
2	154-0733	1	Gasket, Carburetor To Manifold	15	526-0113	1	Washer, Flat (5/16" Screw) Hose, Fuel
3	332-1554	1	Clamp, Insulated (Fits 1/2" Diameter Tube) - Code 23DZ	16			17" Long - Code 15AZ, 15BR, 15BD
4	740-1006	4	Washer, Flat (M8) - Code 15BD, 15CB, 15CL		503-1548	1	30" Long - Code 15BL, 19AS
5			Manifold, Intake	17			15" Long - Code 15BD, 15CL
	541-0275	1	With Un-tapped Boss		503-1574	1	Hose, Breather
	154-2717	1	With Tapped Boss (Wheel Horse and Miller)		503-1606-01	1	Code 19AU, 19BA - Specs A, B, C Code 19AS, 19AU, 19AW, 19BA - Begin Spec C - 3.25" Long
6	740-1006	2	Washer, Flat (M8)	18	502-1038	1	Fitting, Barbed - Code 19BA, 19AU
7	800-0032	2	Screw, Cap - Hex Head (5/16-18 x 1-3/4")	19			Clamp, Hose
8	800-0033	4	Screw, Cap - Hex Head (5/16-18 x 2")		503-0731	2	1/2" Diameter - Code 19BA, 15CL
9	518-0515	1	Clip, Wire - Fuel Line		503-1133	1	.44" Diameter - Code 19AS, 19AW, 19AU, 19BA - Begin Spec C
10	154-2495	2	Gasket, Manifold To Block	20	150-2409	1	Spring, Governor Rod
11	815-0474	1	Screw, Hex Washer Head (1/4-14 x 1/2")				
12	518-0004	1	Clip, Retaining - Control Rod To Carburetor				



## LP Converter Kit

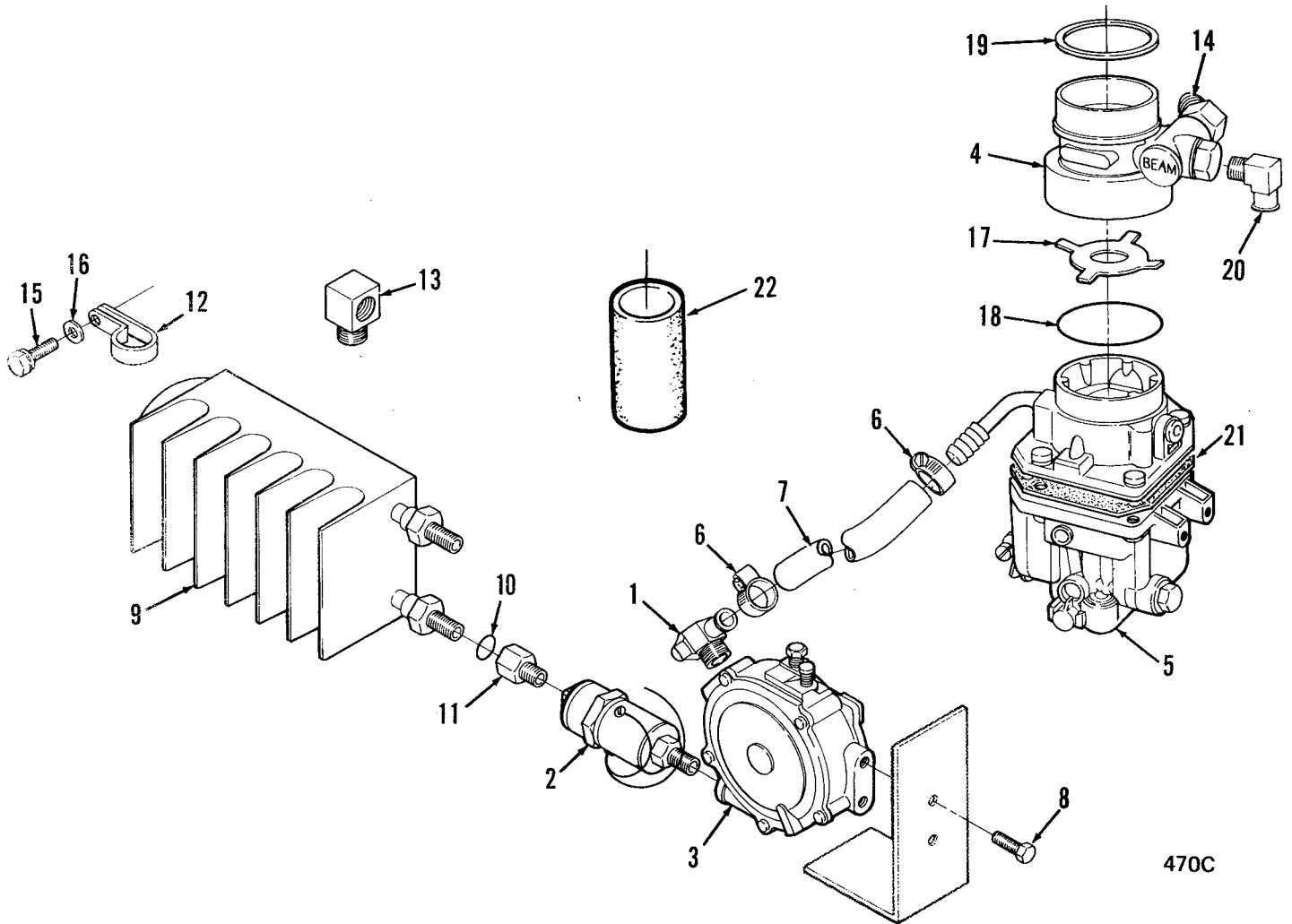


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	148-0941	1	Regulator	5	502-1145	1	Elbow - 90° - Brass (1/2" NPT -3/8 Barb)
2	307-2754	1	Valve, Shut-Off	6	815-0293	1	Screw, Hex Washer Head - Thread Forming (1/4-20 x .75)
3			Bracket, Upper	7	821-0018	3	Screw, Cap - Hex Head (1/4-20 x .625)
	148-0937	1	R.H. Mount	8	526-0018	2	Washer, Flat (1/4" Screw)
	148-0942	1	L.H. Mount				
4			Bracket, Lower				
	148-0938	1	R.H. Mount				
	148-0943	1	L.H. Mount				

# Fuel System LP Gas

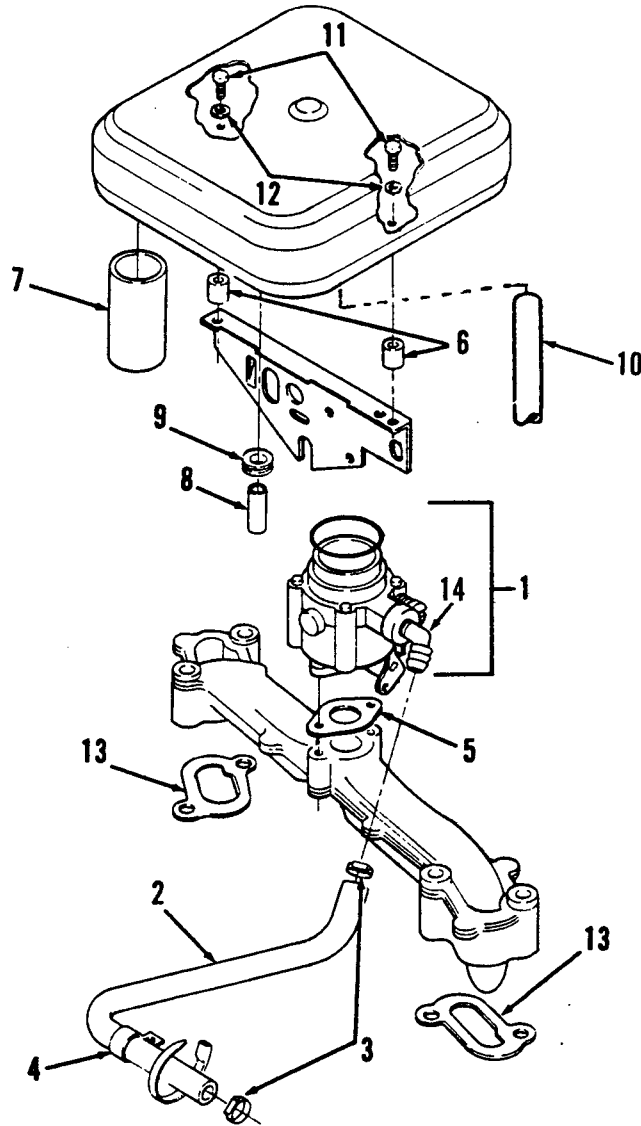
Code 15BU

5620-0235



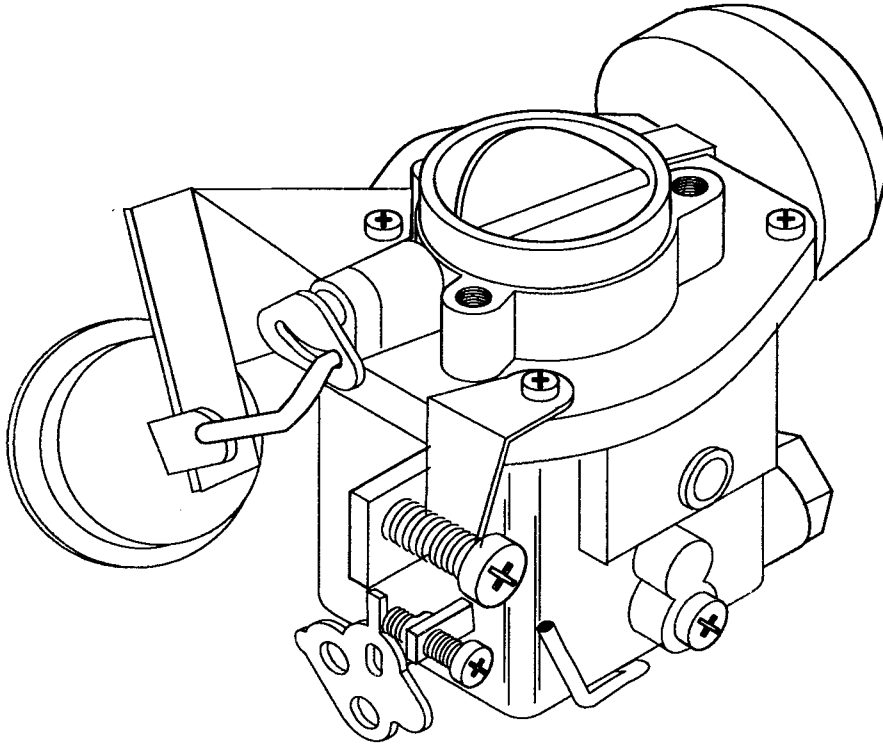
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	148-0907	1	Elbow, Main Jet - 90°	12	332-1554	1	Clamp, Insulated (Fits 1/2" Diameter Tube)
2	307-2618	1	Valve, Fuel Shut-Off	13	502-0054	1	Elbow, 90°
3	148-0909	1	Regulator, LP Gas	14	502-0575	1	Elbow, 45° - Dual Fuel Adapter
4	148-0918-01	1	Adapter, LP Gas LP Only	15	800-0011	2	Screw, Hex Washer Head (1/4-20x2")
5	148-0908-01	1	Dual Fuel Carburetor	16	526-0018	2	Washer, Flat (1/4" Screw)
	-----	1	Carburetor, LP Gas (Use Gasoline Carburetor - Revised)	17	148-0911	1	Deflector, Carburetor
6	503-0032	2	Clamp, Hose (7/8" Diameter)	18	509-0145	1	O-Ring (2" ID)
7	503-1048	1	Hose, Fuel	19	140-2279	1	Gasket, Air Cleaner - Dual Fuel
8	821-0009	2	Screw, Hex Washer Head Self-Locking (1/4-20x3/8")	20	502-0237	1	Elbow, Hose (Male) 90° Dual Fuel
9	148-0904	1	Vaporizer, LP Gas	21	146-0520	1	Gasket, Air Horn
10	509-0035	2	O-Ring (1/2" ID)	22	140-2025-01	1	Tube, Air Intake
11	502-0126	2	Connector, Inverted Male				

## LP Carburetor Kit



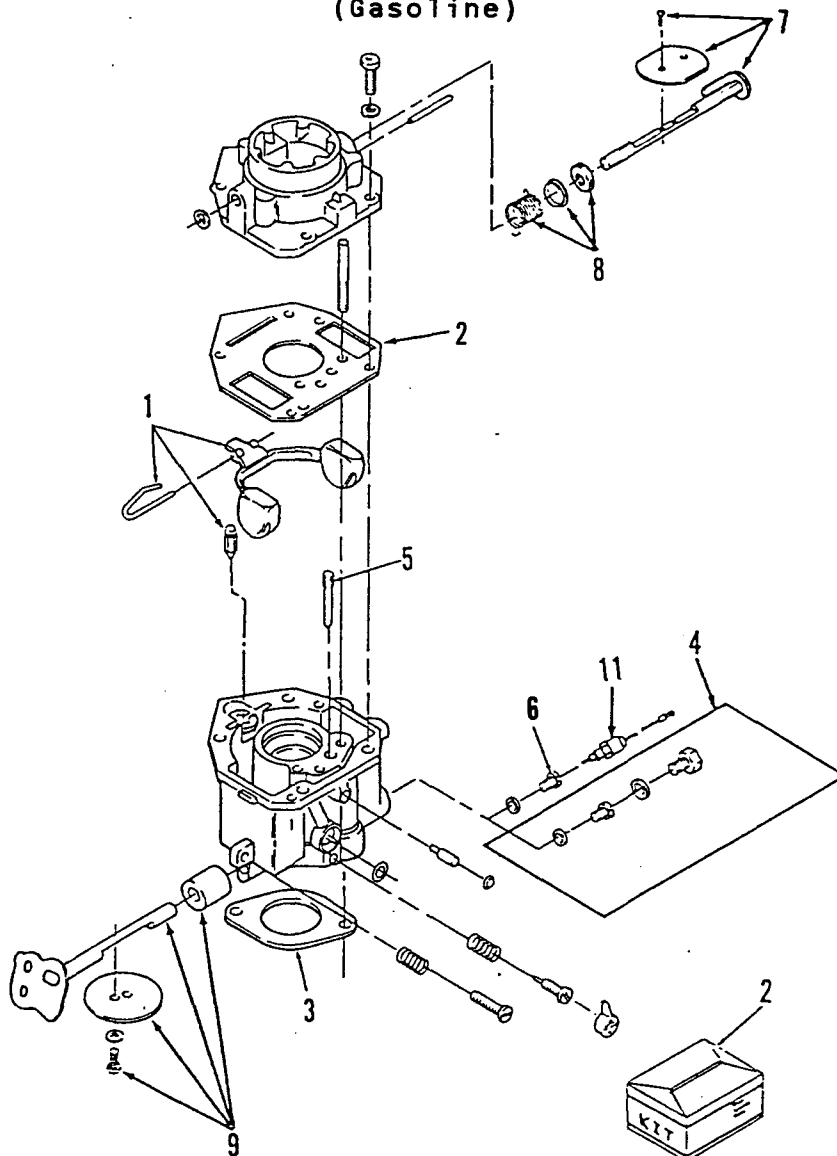
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	146-0562	1	Carburetor, LP	9	508-0021	1	Grommet, Rubber
2	503-1798	1	Hose (3/8" I.D x 18" Long)	10	503-1606-02	1	Hose, Breather -(3.75" Lg) - Begin Spec C
3	503-1133	2	Clamp, Hose	11	821-0013	2	Screw, Cap - Hex Head (1/4-20 x 1)
4	332-1356	1	Clamp, Loop	12	526-0018	2	Washer, Flat (1/4" Screw)
5	141-0281	1	Gasket, Carburetor Mounting	13	154-2495	2	Gasket, Intake Manifold
6	140-2624-02	2	Spacer, Air Cleaner	14	502-1146	1	Elbow, Brass - 45°
7	140-2025-01	1	Hose, Air Inlet				
8	123-1484-01	1	Tube, Breather - Copper				

**Carburetor Components  
(Gasoline-Auto Choke)**



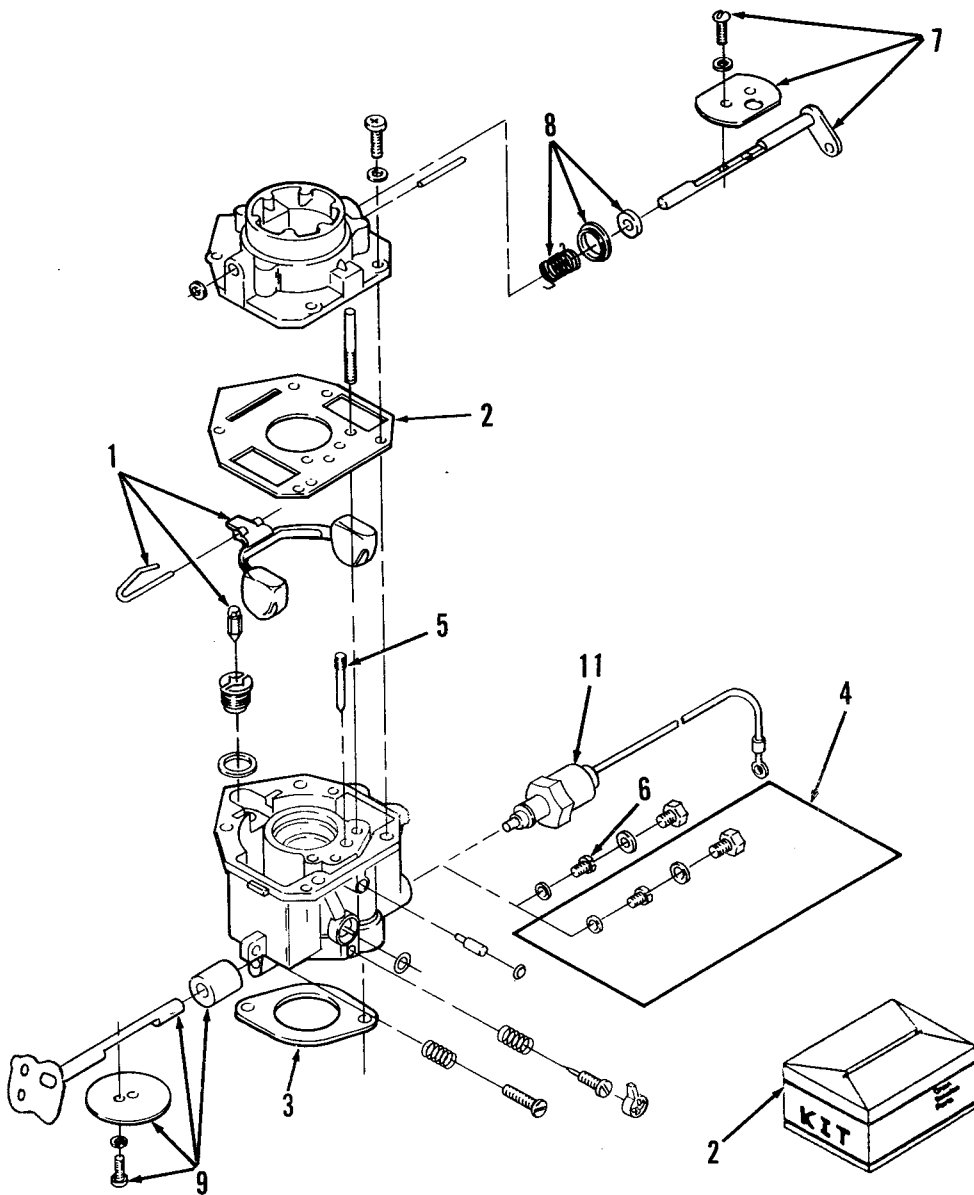
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
146-0506		1	Carburetor, Complete	146-0503		1	Kit, Throttle shaft (Includes Valve Set Screw, Throttle Shaft, Air Filter and Throttle Valve)
146-0425		1	Jet, Idle				
146-0343		1	Jet, Power				
146-0441		1	Cap, Idle Limiter				
146-0341		1	Spring, Power Needle	146-0437		1	Kit, Float (Includes Float, Valve and Pin)
146-0342		1	Needle, Complete Power				
146-0498		1	Kit, Screw and Plug (Includes Screws, Gaskets, Plugs and Idle Adjust Spring)	146-0499		1	Kit, Gasket (Includes Air Horn, Gasket, Power Plug Gasket (2) and O-Ring)

### Carburetor Components (Gasoline)



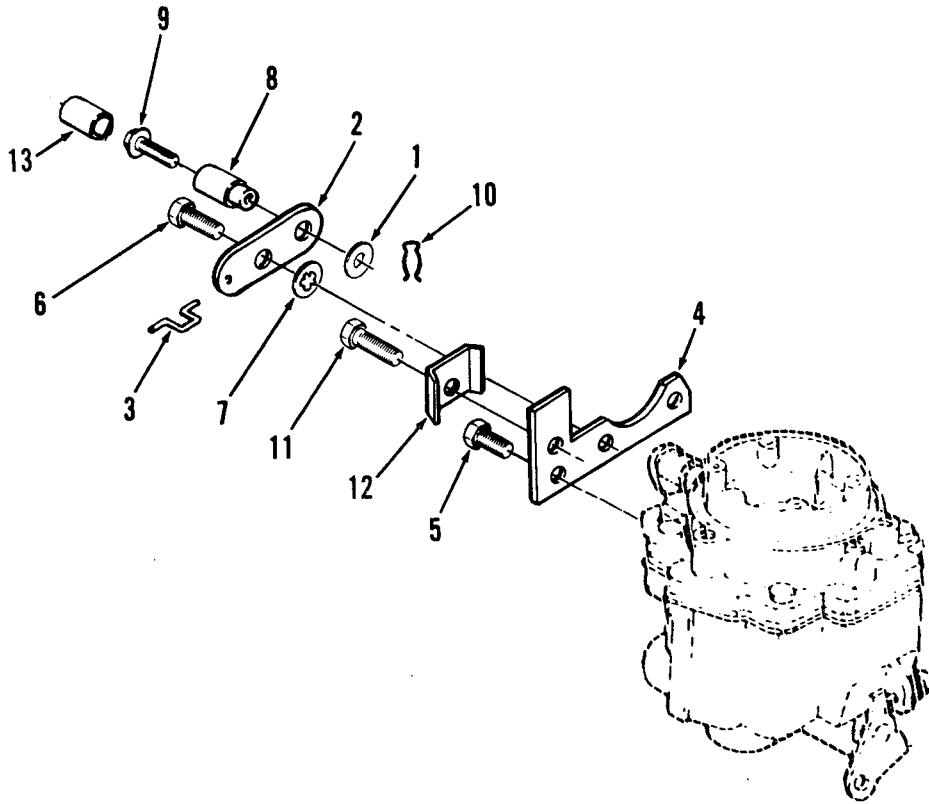
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Carburetor, Complete (Includes Mounting Gasket)	6			Jet, Power
	146-0495	1	P216, P218		146-0396	1	P216, P218
	146-0496	1	P220		146-0391	1	P220
1	146-0437	1	Kit, Float (Includes Float, Pin And Valve)	7	146-0433	1	Kit, Shaft-Choke (Includes Choke Valve, Valve Set Screw and Air Filter)
2	146-0500	1	Kit, Repair (Includes Screw And Plug Package, Gasket Package, Float Valve, Idle Adjust Needle And Spring, Mounting Gaskets, Idle Limit Cap)	8			Kit, Lever-Choke (Includes Choke Lever Ring, Choke Spring And Choke Collar)
3	154-0733	2	Gasket, Carburetor Mounting		146-0434	1	P216, P218
4			Jet, Power - Fixed - Optional (High Altitude Application)		146-0435	1	P220
	146-0458	1	P216, P218	9	146-0503	1	Kit, Shaft-Throttle (Includes Valve Set Screw, Air Filter And Throttle Valve)
	146-0347	1	P220	11	146-0502	1	Solenoid, Fuel Cut-off
5		1	Jet, Idle				
	146-0425	1	P216, P218				
	146-0420	1	P220				

## Carburetor Components (Gasoline)



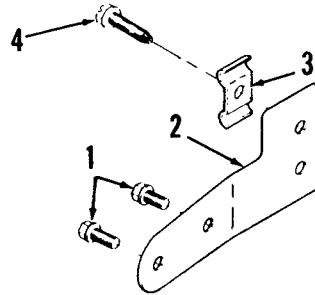
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Carburetor, Complete (Includes Mounting Gasket)	6			Jet, Power
	146-0428	1	P216, P218		146-0396	1	P216, P218
	146-0430	1	P220		146-0391	1	P220
1	146-0437	1	Kit, Float (Includes Float, Pin and Valve)	7	146-0433	1	Kit, Shaft-Choke (Includes Choke Valve, Valve Set Screw and Air Filter)
2	146-0500	1	Kit, Repair (Includes Screw and Plug Package, Gasket Package, Float Valve, Idle Adjust Needle and Spring, Mounting Gaskets, Idle Limit Cap)	8			Kit, Lever-Choke (Includes Choke Lever Ring, Choke Spring And Choke Collar)
3	154-0733	2	Gasket, Carburetor Mounting		146-0434	1	P216, P218
4			Jet, Power - Fixed - Optional (High Altitude Application)		146-0435	1	P220
	146-0458	1	P216, P218	9	146-0503	1	Kit, Shaft-Throttle (Includes Valve Set Screw, Air Filter And Throttle Valve)
	146-0347	1	P220	11			Solenoid, Fuel Cut-off
5	146-0425	1	Jet, Idle		146-0467	1	Used on Carburetors 146-0412, 146-0414, 146-0415
					146-0502	1	Used on Carburetors 146-0478, 146-0479, 146-0480

## Choke Control (Front Pull)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	526-0140	1	Washer, Flat (#10 Screw)	8	152-0155	1	Swivel, Choke Lever
2	153-0523	1	Lever, Choke	9	815-0693	1	Screw, Machine - Hex Head (#8-32x.375")
3	153-0500	1	Link, Choke	10	516-0059	1	Pin, Cotter
4	153-0524	1	Bracket, Choke Cable	11	815-0359	1	Screw, Tapping - Slotted Hex Washer Head (#10-32x7/8")
5	821-0004	1	Screw, Cap - Hex Washer Head (#10-32x1/4")	12	153-0514	1	Clip, Choke Cable
6	815-0480	1	Screw, Shoulder (#10-32x.34")	13	517-0177	1	Plug, Cap
7	854-0010	1	Washer, Lock - IT (#10)				

### Choke Control (Rear Pull)

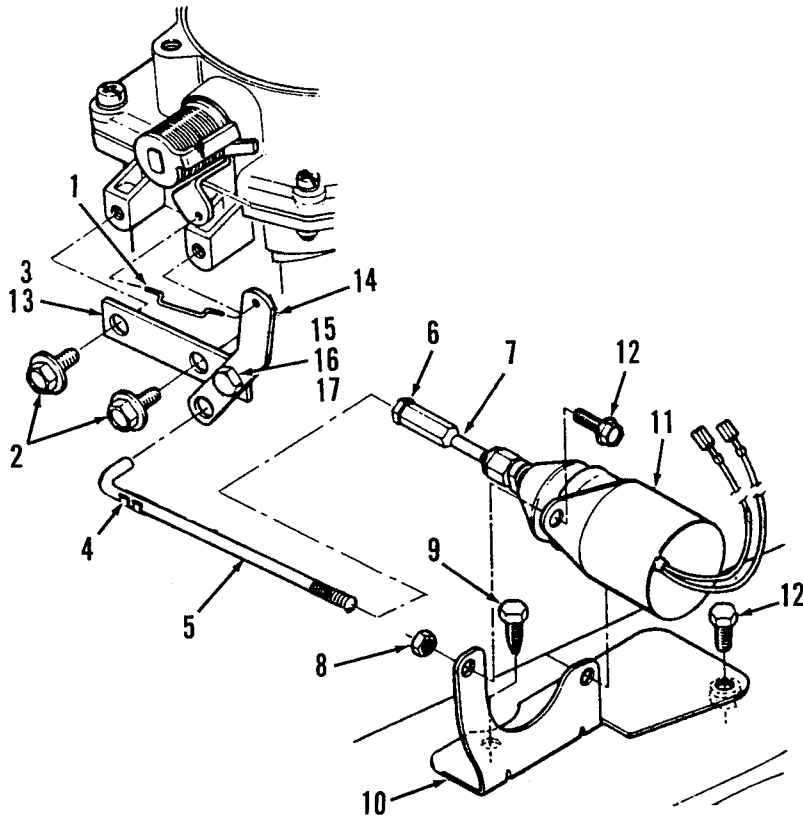


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0004	2	Screw, Cap - Hex Washer Head (10-32 x 5/16")	3	153-0514	1	Clip, Choke Cable
2	153-0515	1	Bracket, Choke Cable	4	815-0359	1	Screw, Tapping - Slotted Hex Washer Head (#10-32 x 7/8")



## Remote Choke Spec D

5620-0405  
5620-0406

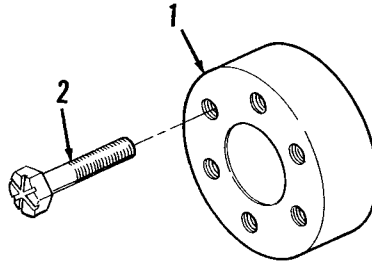


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	153-0500	1	Link, Choke	10	307-2751	1	Bracket, Solenoid
2	821-0004	2	Screw, Lk H (10-32 x 3/8)	11	307-2750	1	Solenoid, 12 Volt
3	153-0642	1	Bracket Assy, Choke (Includes Parts Marked *)	12	821-0010	2	Screw, Lock Head Flange (1/4-20 x 1/2")
4	518-0006	1	Clip, Lock	13	150-2480	1	*Bracket, Choke
5	150-2478	1	Rod, Choke	14	150-2479	1	*Lever, Choke
6	870-0053	1	Nut, Hex Mach (10-32)	15	815-0480	1	*Screw, Pan Head Shoulder (10-32)
7	150-2481	1	Swivel, Link	16	870-0298	1	*Nut, Lock (10-32)
8	870-0212	2	Nut, Self Lk (1/4-20)	17	526-0008	1	*Washer, Flat (#10 Screw)
9	815-0290	4	Screw, HWH THD Form (1/4-20 x 5/8)				

\* - Parts Included in 153-0642 Choke Bracket.

# Drive Plate Hub

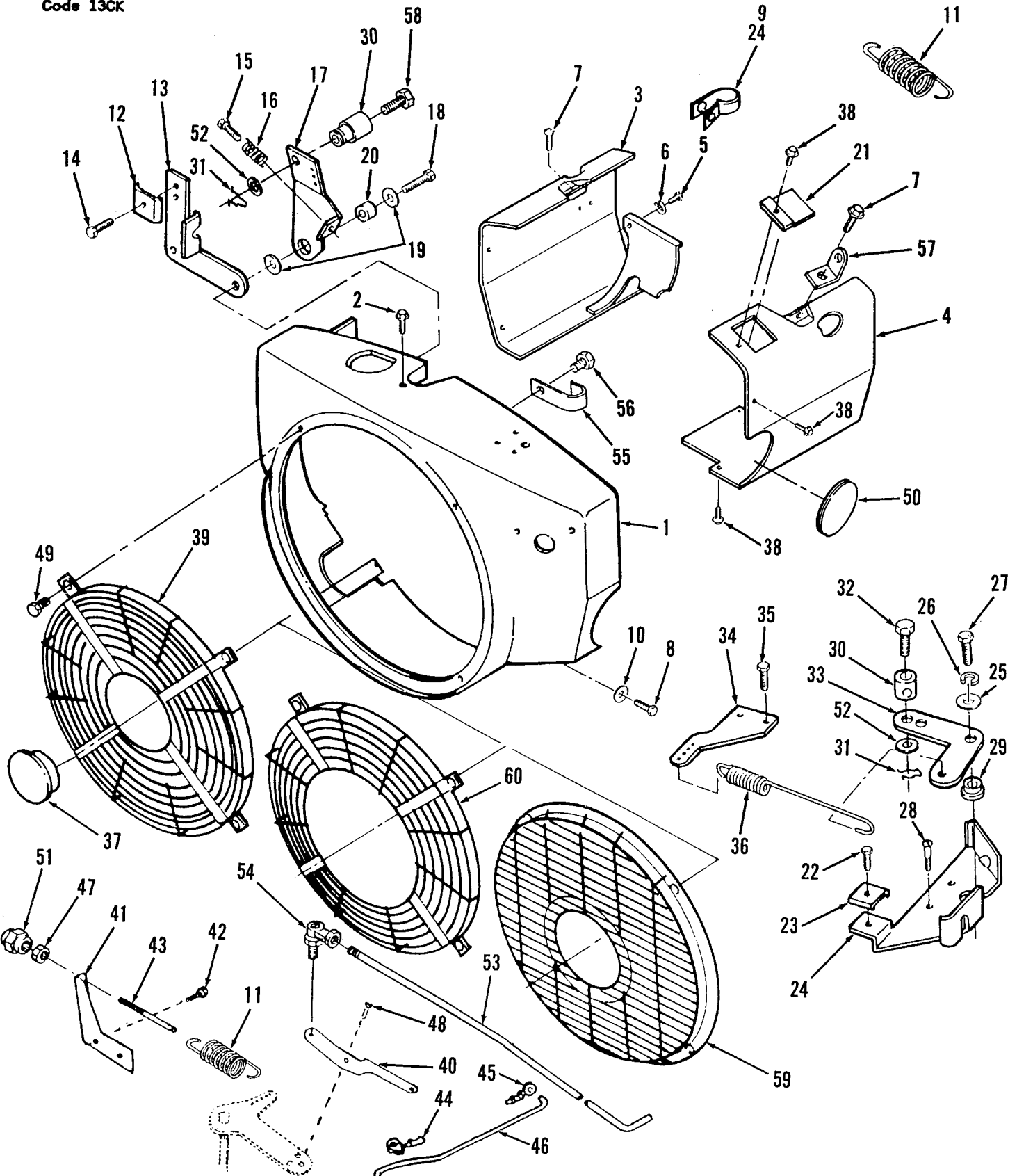
5620-0267



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	104-1674	1	Hub, Drive Plate	2	805-0019	6	Bolt, Place - Grade 8 (3/8-16 x 1-7/16")

# Blower Housing And Governor

Code 13BJ  
Code 13BK  
Code 13CC  
Code 13CD  
Code 13CG  
Code 13CK



## Blower Housing and Governor

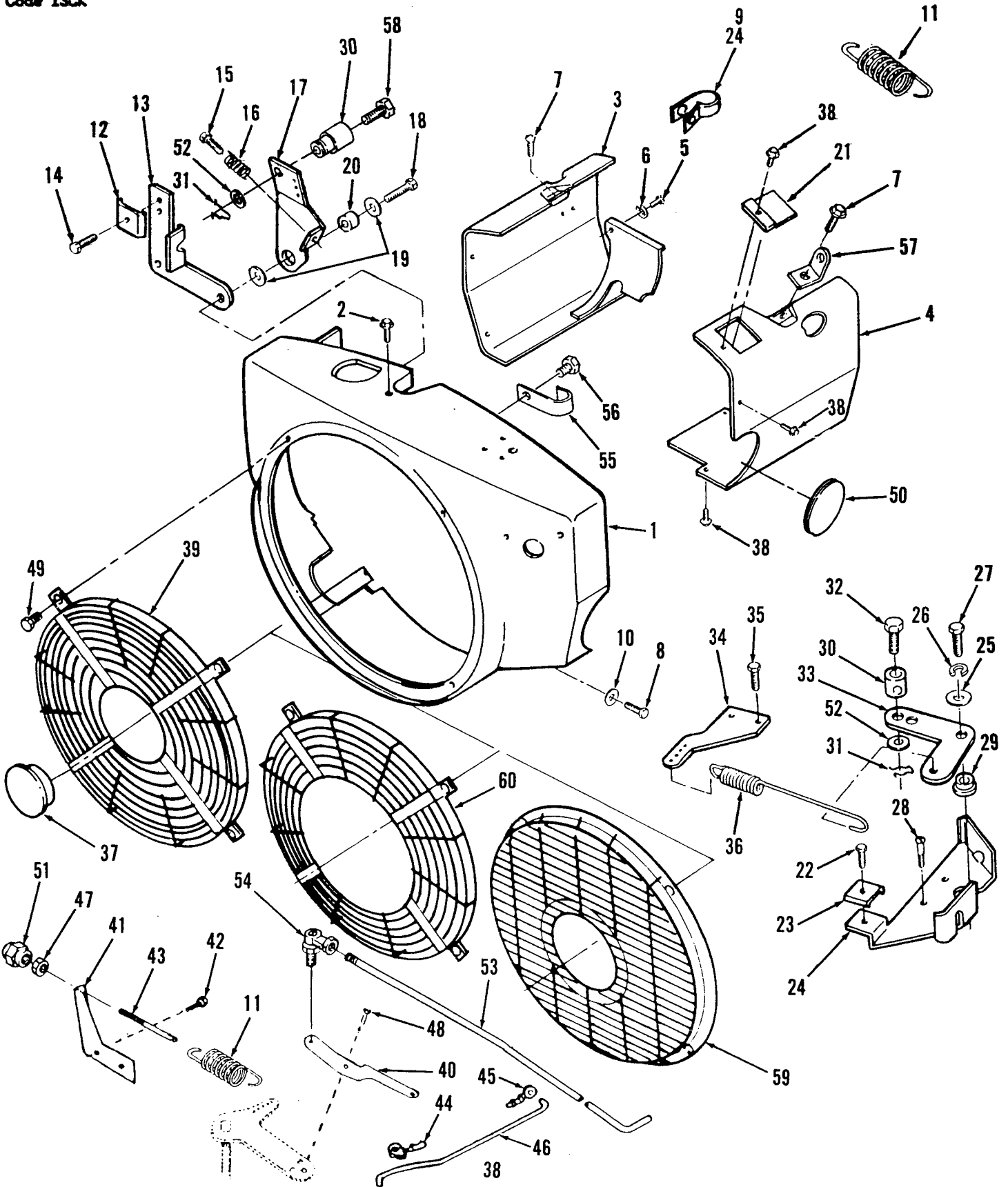
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5620-0211

5620-0310  
5620-0311  
5620-0312  
5620-0313-01  
5620-0313-02  
5620-0313-03  
5620-0313-61  
5620-0384  
5620-0386

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-4728-50	1	Housing, Blower Code 13BJ,13BK,13CC,13CD and 13CG - Painted	11	150-1214	1	Spring, Governor 5 Ball - Code 13BJ,13CK, 23DZ - Code 13CG (Use with Code 13CB)
	134-4728-50	1	Code 13CE,13CD,23DC - Painted		150-1740	1	10 Ball - Code 13CH (Use with Code 13CF) - Code 13CG use with 13CC
	134-4729-50	1	Code 13CK - Painted		150-2409	1	5 Ball - Code 13CG (Use with 13CC)
	134-4369	1	Code 23DZ	12	153-0514	1	Clamp, Cable - Code 13BJ,13CK, 23DZ
	134-4879-50	1	Begin Spec C - Code 23DC - Painted	13	150-2345-02	1	Bracket, Cable - Code 13BJ, 13CK,23DZ
2	815-0261	2	Screw, Tapping - Hex Washer Head (1/4-20 x 7/16")	14	815-0359	1	Screw, Tapping - Hex Head (#10-32 x 1/2") - Code 13BJ
3	134-4615-50	1	Housing, Cylinder Air - LH Code 31AZ,31BD,31BC - Painted	15	815-0510	1	Screw, Tapping - Hex Head (#6-32 x 5/8") - Code 13BJ, 13CK,23DZ
	134-4610-50	1	Code 23DK - With 31AZ - With Weld Nuts - Painted	16	150-1398	1	Spring, Idle Setting - Code 13BJ,13CK,23DZ
	134-4371	1	Code 23DZ	17	150-2344-02	1	Arm, Governor Control Without Swivel - Zinc Plated - Code 13BJ,13CK
	134-4956-50	1	Code 23EF - P218 - Painted		150-1345	1	Used With Swivel - Code 23DZ
4	134-4798-50	1	Housing, Cylinder Air - RH Code 23DK - With 31AZ - With Weld Nuts - Painted	18	821-0010	2	Screw (1/4-20 x 1/2") Lock Head
	134-3518	1	Code 23DZ		815-0436	2	H.W.H.
	134-4824	1	Code 23DC	19	526-0021	2	Washer, Flat (1/4" Screw) - Code 13BJ,13CD,13CG
	134-4796-50	1	Code 31AZ,31BD - Painted	20	150-1269	1	Bushing, Control Arm - Code 13BJ,13CK,23DZ
	134-4957-50	1	Code 23EF - P218 - Painted	21	134-3626-50	1	Cover, Voltage Regulator - Painted - Code 31BD,23EF
5	815-0290	2	Screw, Tapping - Hex Washer Head (1/4-20 x 5/8")	22	815-0391	1	Screw, Tapping - Hex Head (#10-32 x 1/2")
6	526-0021	2	Washer, Flat (1/4" Screw)	23	153-0514	1	Clamp, Throttle Cable
7	821-0016	2	Screw, Cap - Hex Washer Head (5/16-18 x 3/4")	24	332-2634	1	Clamp, J - Oil Cooler Line - Code 47AW
8			Screw, Tapping - Hex Washer Head (1/4-20 x 5/8")				
	815-0290	4	(1/4-20 x 5/8")				
	815-0337	4	(1/4-20 x 3/4") Units With 3 Quart Oil Base - Code 17CM				
9	332-2319	1	Clamp, Wire - Alternator Leads (5/16" Diameter)				
10	526-0018	4	Washer, Flat (1/4" Screw)				

# Blower Housing And Governor

Code 13BJ  
Code 13BK  
Code 13CC  
Code 13CD  
Code 13CG  
Code 13CK



## Blower Housing and Governor

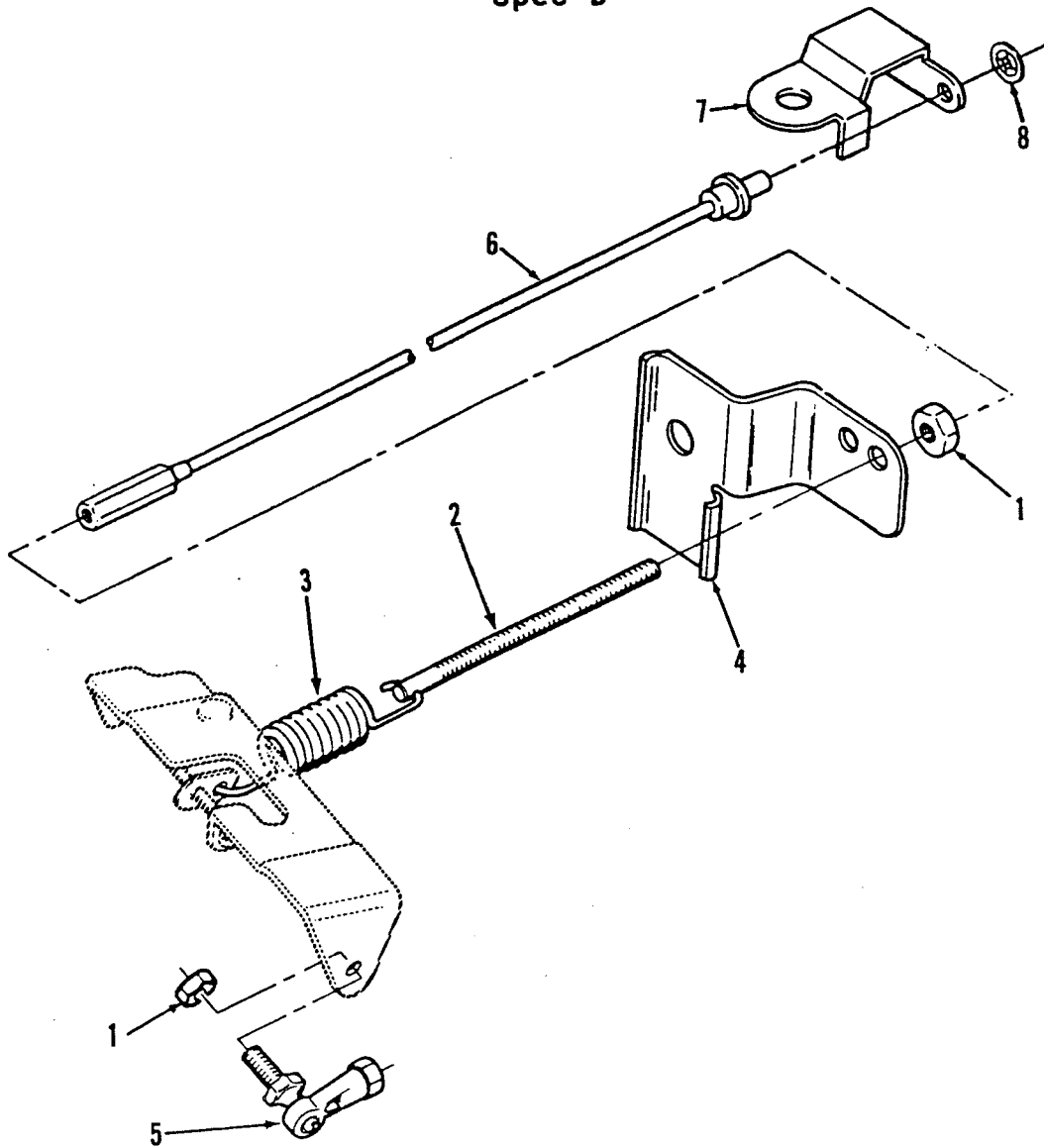
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5620-0313-03  
5620-0313-61  
5620-0384  
5620-0386

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
24	150-1726-01	1	Bracket, Governor Control Mounting - Zinc Plated	43	150-0694	1	Stud, Adjusting - Code 13CG
25	526-0021	1	Washer, Flat (1/4" Screw)	44	518-0406	1	Clip, Retaining - Control Rod Code 13CG
26	850-0040	1	Washer, Lock - Spring (1/4")	45	518-0004	1	Clip, Retaining - Control Rod Code 13CG
27	800-0007	1	Screw, Cap - Hex Head (1/4-20 x 1")	46	150-2460	1	Rod, Control - Code 13CG - Zinc Plated
28	815-0439	3	Screw, Hex Washer Head - Tapping (8-15 x 1/2")	47	870-0131	1	Nut, Hex - Governor Adjusting (W/ET 10-32) - Code 13CG
29	150-1727	1	Bushing, Governor Control	48	815-0181	2	Screw, Thread Cutting - Hex Head W/ET (10-32 x 1/2")
30	152-0155	1	Swivel, Throttle Lever	49			Screw
31	516-0059	1	Pin, Cotter		815-0575	4	Hex Washer Head (1/4-20 x 3/8")
32	815-0693	1	Screw, Machine - Hex Head		815-0721	4	Pan Head - Taptite (Special) Code 23DN, 13BJ, 13CG
33	150-1366	1	Link, Governor Control	50	508-0273	1	Grommet, Air Seal - Code 17CE
34	150-1754-01	1	Adapter, Governor Arm (Zinc Plated)	51	150-0621	1	Nut, Governor - Acorn Code 23DE, 23DC, 13CG
35	815-0555	2	Screw, Tapping - Hex Head W/ET (#10-32 x 1/2")	52	526-0006	1	Washer, Flat (#12 Screw) Code 13BK, 23DZ
36	150-1755	1	Spring, Governor - Code 13BK, 39AG	53	150-0629	1	Rod, Governor - Code 13CG Use Only With Code 13CC
37			Plug, Black Nylon	54	150-0639	1	Joint, Ball - Code 13CG Use Only With Code 13CC
	517-0261	1	Code 23DE - 2" Dia.	55	518-0515	1	Clip, Wire - Code 13BJ, 13BK, 13CD, 13CG
	517-0136	1	Code 13BJ, 15BB, 23DH - 59/64" Dia.	56	815-0474	1	Screw, Hex Washer Head (1/4-20 x 1/2") - Code 13BJ, 13BK, 13CD, 13CG
	99-2393	1	Logo, Nameplate - Code 23DN - 2.475" Dia.	57			Bracket Lifting Zinc Plated
	99-2420	1	Logo, Nameplate (Miller) Supplied by Onan - 2.475" Dia.		403-1523-01	2	Code 23DZ
38	821-0008	4	Screw, Cap - Hex Washer Head (1/4-20 x 5/16")		403-1021	2	Code 23DZ
39	134-4560-50	1	Guard, Stationary - Painted (See Illustration) Code 23DE, 23DH, 23DN, 23ED	58	815-0104	1	Screw, Fillister Head (8-32 x 5/16") - Code 23DZ, Guard, Stationary (See Illustration) - Code 23DE, 23DH, 23DN, 23ED
40			Lever, Governor - Code 13CC		134-4689	1	No Center Hole
	150-2427-02	1	Zinc Plated		134-4689-02	1	Center Hole Dia. 3.88"
	150-2313-01	1	Zinc Plated - Spec B, P216	60	134-4556	1	Guard, Stationary (See Illustration) - Code 23DE, 23DH, 23DN, 23ED
	150-2388	1	Begin Spec C - P218 - Miller				
	150-2408-02	1	Begin Spec B - P216, P220				
41	150-2264	1	Bracket, Governor Adjust - Code 13CG, 13BJ				
42	821-0010	2	Screw, Lock Head (1/4-20 x 1/2") Code 13CG, 13BJ				

**Governor (Mechanical)  
Spec D**

5620-0419

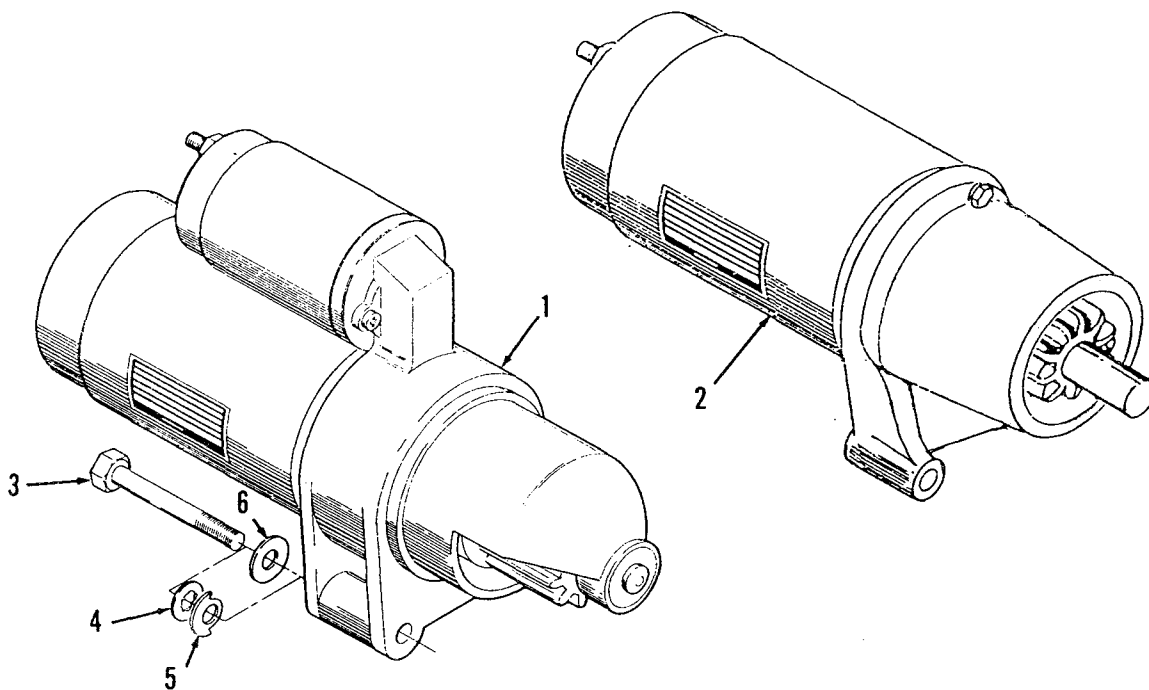


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0131	2	Nut, Hex - Self-Locking (10-32)	5	150-0939	1	Joint, Ball
2	150-0096	1	Stud, Speed Adjustment	6	150-2294	1	Cable, Governor Adjust
3	150-1612	1	Spring, Governor	7	150-2295	1	Bracket, Governor Adjust Cable
4	150-2298	1	Bracket, Governor	8	518-0582	1	Retainer - Push On

## Starter

Code 33AS  
 Code 33AT  
 Code 33AV  
 Code 33AW  
 Code 33AZ  
 Code 33BA  
 Code 33BB

5620-0020  
 5620-0032  
 5620-0166  
 5620-0351  
 5620-0360-01

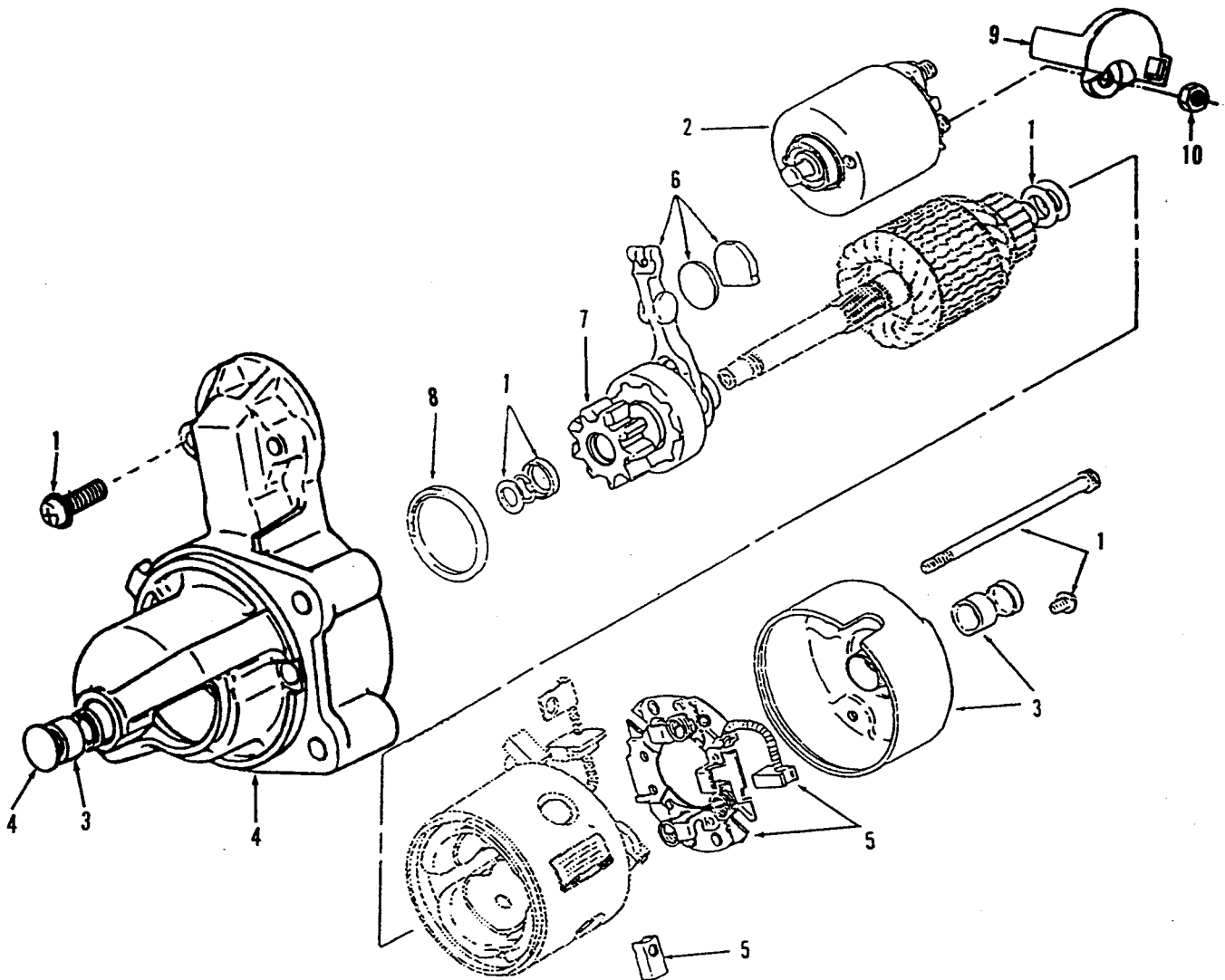


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Starter - Solenoid Shift (See Separate Page for Components)	3	800-0595	2	Screw, Cap Hex Head (5/16-18 x 3-1/2")
	191-1808-05	1	Code 33AS	4	854-0017	1	Washer, Lock - IT (5/16")
	191-1808-04	1	Code 33AT	5	526-0337	1	Washer (Special) - Outside Mounting Bolt
	191-1949-05	1	Code 33AS, 33AZ, 33BA	6	526-0122	2	Washer, Flat (5/16" Screw) - Inside Mounting Bolt
	191-1949-07	1	Code 33AT, 33AW				
2	191-1828	1	Starter - Inertia (Bendix) Type (See Separate Page For Components) - Code 33AV				

NOTE: Onan Part Number Stamped on the Starter Nameplate for Identification.



**Starter Components  
(191-1949-05 & 191-1949-07)**

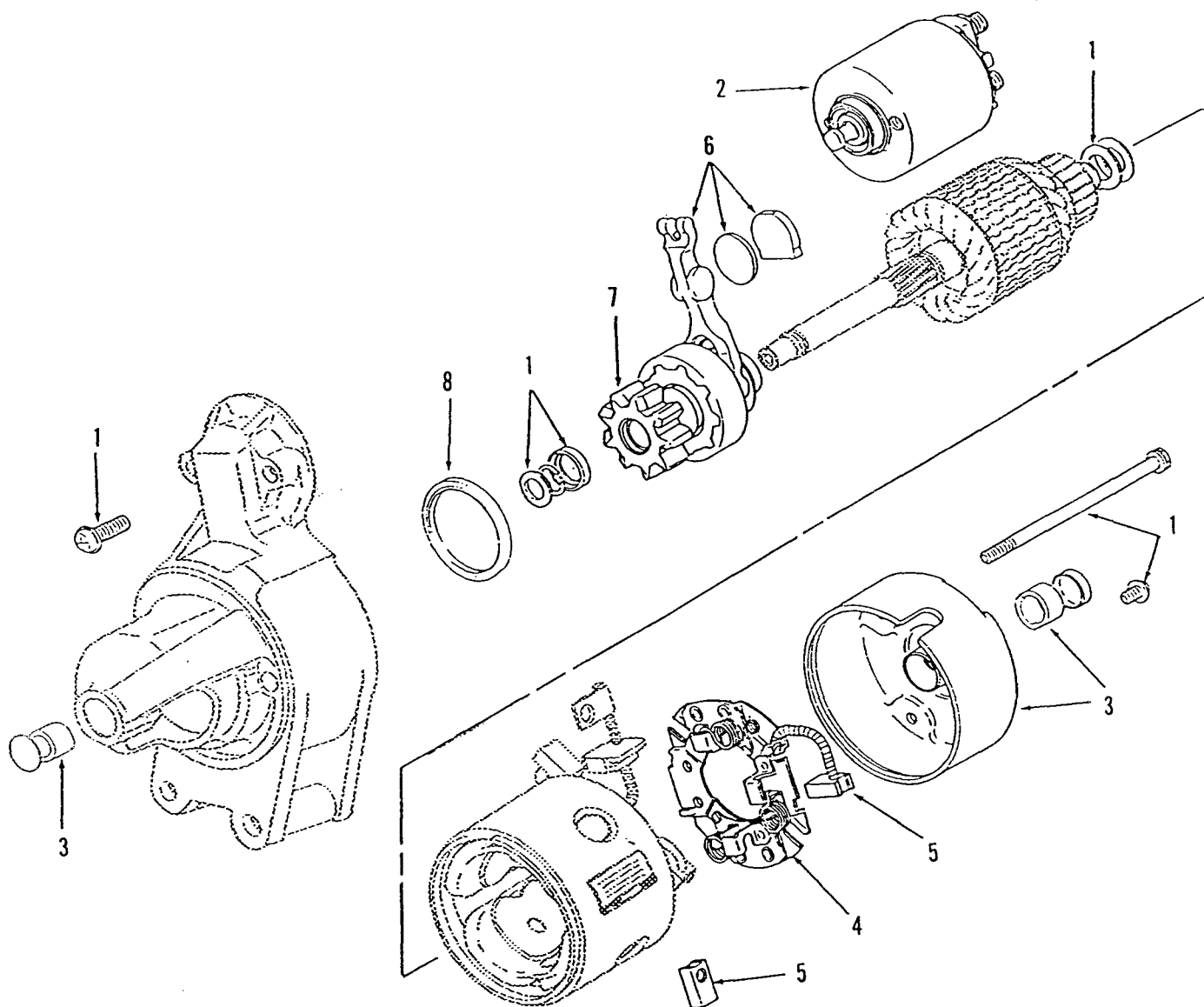


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1954	1	Kit, Hardware - Starter (Includes (2) Solenoid Mtg Screws, 2 Thru Bolts, Armature Shims, Pinion Stop Collar, Retaining Ring and Solenoid Terminal Nuts)	5	191-1951	1	Kit, Brush - Starter (Includes (2) Negative and (2) Positive Brushes and Brush Holder)
2	191-1956	1	Kit, Solenoid - Starter (Includes Solenoid and Spring Plunger)	6	191-1766	1	Kit, Shift Lever - Starter (Includes Lever, Wear Plate, Rubber Plug and Grease)
3	191-1931	1	Kit, Bushing - Starter (Includes Rear Cap with Bushing and Front Bushing)	7	191-1953	1	Kit, Clutch - Starter (Includes Pinion Gear and Clutch Assembly)
4			Kit, Mounting Bracket (Includes Front Bracket, Front Bushing, Dust Seal, Thrust Washer, Cap Plug and OD Pinion Seal)	8	191-1955	1	Kit, Dust Seal (Includes ID, OD Pinion Seals)
	191-1950	1	Code 33AT, 33AW	9	191-1947	1	Cap, Starter Solenoid
	191-1952	1	Code 33AS, 33AZ, 33BA	10	750-1006	1	Nut, Hex - Metric (M8)

NOTE: Phantom Items Not For Sale, For Replacement Order Complete Starter.

NOTE: Onan Part Number Stamped on the Starter Nameplate for Identification.

**Starter Components**  
(191-1808-04 & 191-1808-05)

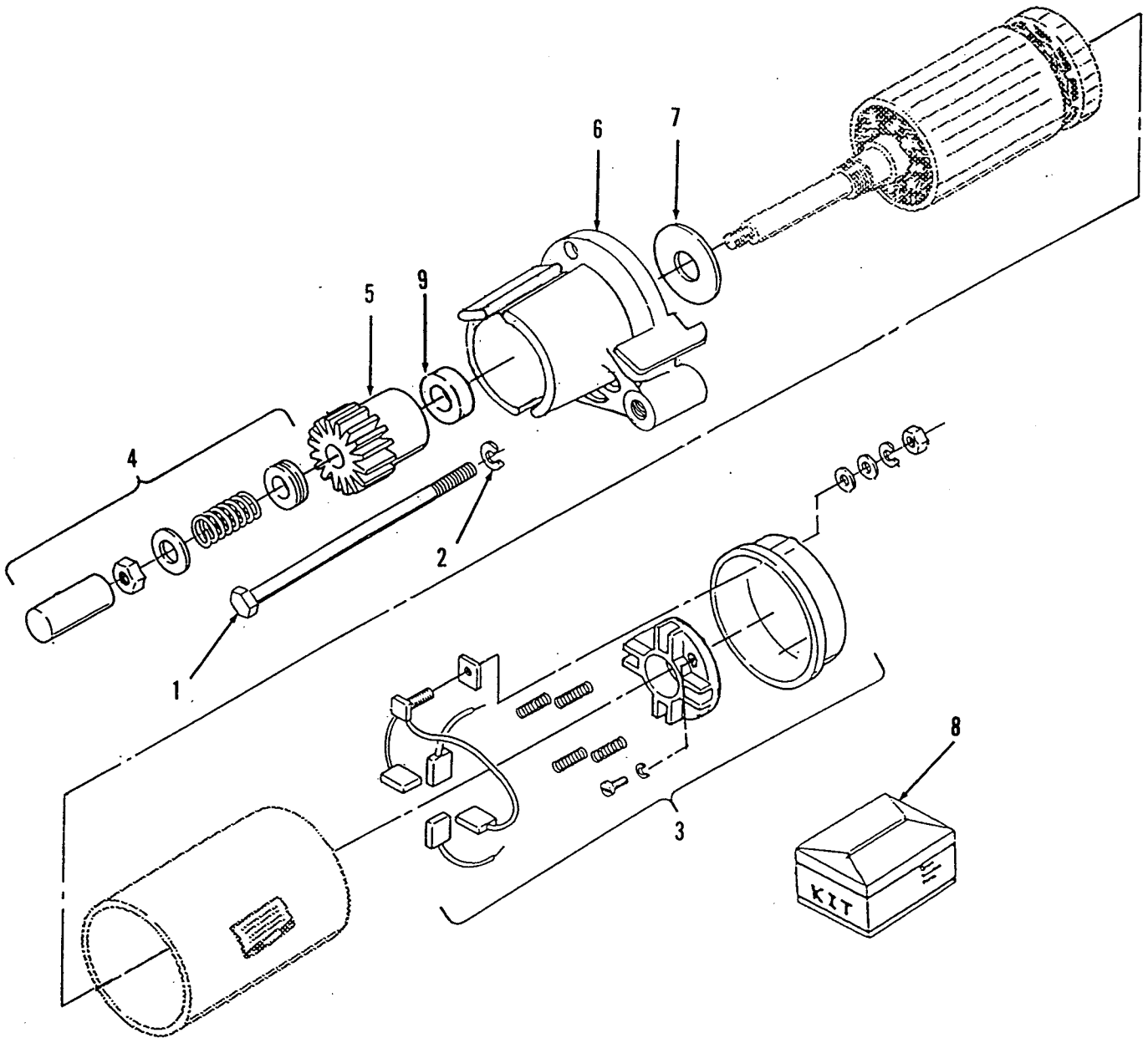


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1765	1	Kit, Hardware - Starter (Includes (2) Solenoid Mtg Screws, 2 Thru Bolts, Armature Shims, Pinion Collar and Retaining Ring)	4	191-1764	1	Holder, Brush (Includes Negative Brush)
2	191-1809	1	Kit, Solenoid - Starter (Includes Solenoid and Spring Plunger)	5	191-1763	1	Kit, Brush - Starter (Includes (2) Negative and (1) Positive Brushes)
3	191-1762	1	Kit, Bushing - Starter (Includes Rear Cap with Bushing and Front Bushing)	6	191-1766	1	Kit, Shift Lever - Starter (Includes Lever, Wear Plate and Rubber Plug)
				7	191-1810	1	Clutch Assembly, Starter (Includes Pinion Gear)
				8	191-1811	1	Seal, Dust

NOTE: Phantom Items Not For Sale, For Replacement Order Complete Starter.

NOTE: Onan Part Number Stamped on the Starter Nameplate for Identification.

## Starter Components (191-1828)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1048	2	Bolt, Hex Head
2	870-0438	2	Retainer, Bolt
3	191-1532	1	Cap Assembly, End (Includes Cap, Brushholder, Springs, Brushes, Terminal Hardware)
4	191-1359	1	Cover Assembly (Includes Dust Cover, Spring, Spacer, Nut and Washer)

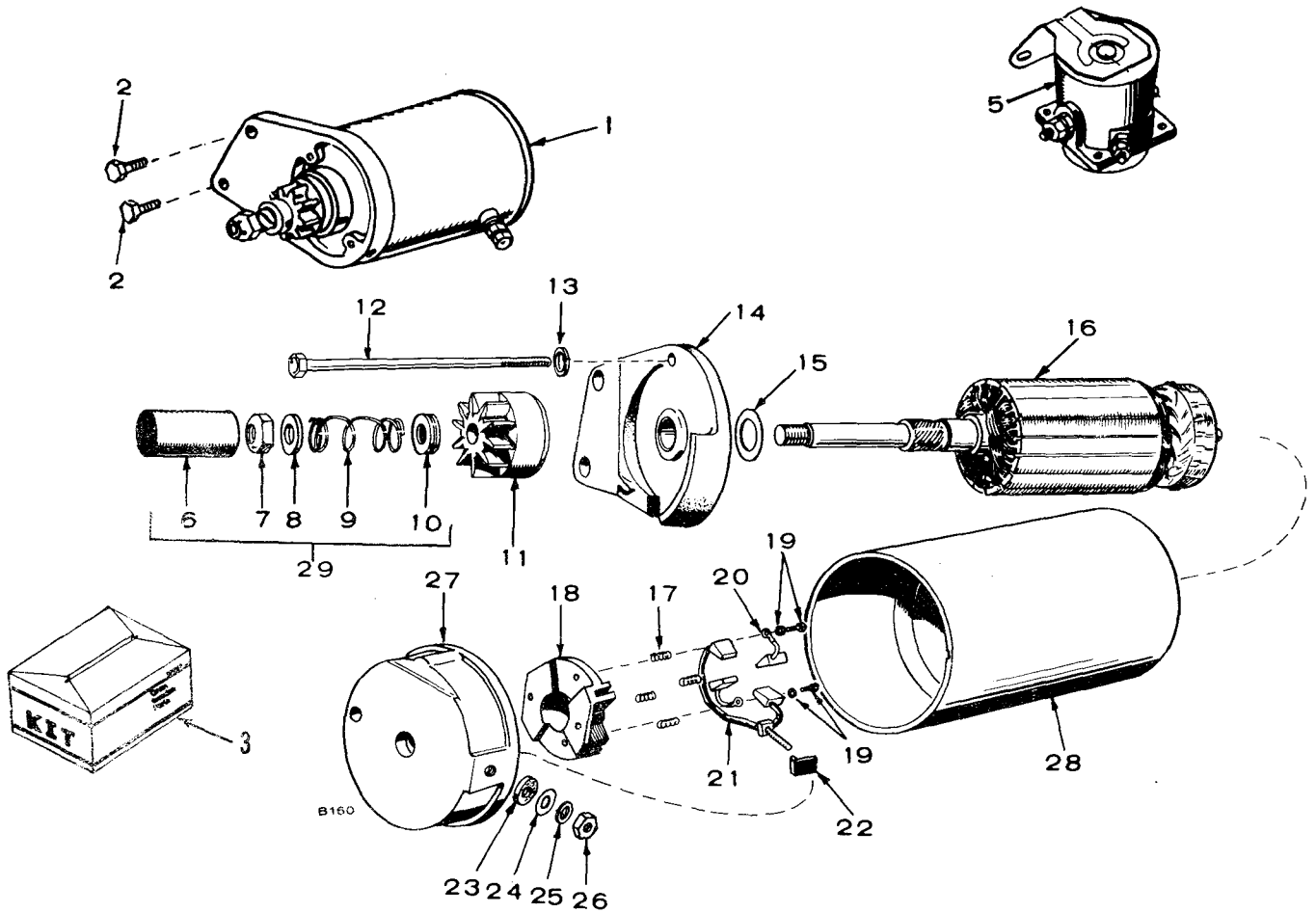
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
5	191-1156	1	Gear, Drive
6	191-1671	1	Cap Plate, End - Front
7	191-1038	1	Washer, Thrust
8	191-1841	1	Kit, Repair (Includes Brush with Stud, Springs and Brushes)
9	191-1534	1	Seal, Dust

NOTE: Onan Part Number Stamped on the Starter Nameplate for Identification.

NOTE: Phantom Items Not For Sale, For Replacement Order Complete Starter.

Code 23DZ

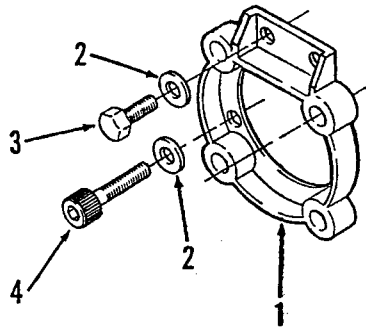
### Starter (Heavy Duty)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-0933	1	Motor, Starter (Complete)	17	§	4	†*Spring, Brush
2	815-0570	2	Screw, Cap - Hex Washer Head (5/16-18 x 1")	18	§	1	†Brush Holder
3	191-1041	1	Kit, Repair - Brush, Spring and Stud (Includes Parts Marked *)	19	§	2	†Screw and Lockwasher
5	307-1031	1	Relay, Start Solenoid	20	§	2	†*Brush, Ground
6	§	1	xCover, Dust	21	§	1	†*Stud and Brush, Input
7	§	1	xNut, Stop	22	§	1	†Bushing, Insulation - Input Stud
8	§	1	xWasher, Stop Nut	23	§	1	†Washer, Insulation - Input Stud
9	§	1	xSpring, Anti-drift	24	§	1	†Washer, Flat - Input Stud
10	§	1	xSpacer, Dust Cover	25	§	1	†Washer, Lock - Input Stud
11	191-1036	1	Drive	26	§	1	†Nut, Securing - Input Stud
12	191-1048	2	Screw, Hex Cap - Special	27	191-1040	1	Cap, Commutator (Includes Parts Marked †)
13	850-0040	2	Washer, Lock (1/4")	28	§	1	Housing, Starter Motor
14	191-1037	1	Cap, Drive End	29	191-1359	1	Dust Cover (Includes Parts Marked x)
15	191-1038	1	Washer, Armature Thrust - Special				
16	191-1039	1	Armature				

† - Included in the 191-1040 Cap.  
 \* - Included in the 191-1041 Brush, Spring and Stud Kit.  
 § - Not Sold Separately.  
 x - Included in 191-1359 Dust Cover.

## Clutch Adapter

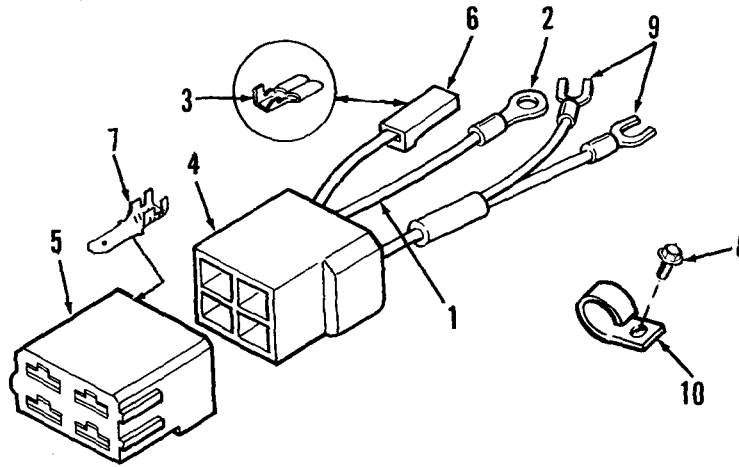


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	190-0597	1	Adapter, Clutch - Electric	3	800-0051	2	Screw, Cap- Hex Head (3/8-16x1-1/4")
2	526-0245	4	Washer, Flat(3/8" Screw)	4	802-0073	2	Screw, Socket Head (3/8-16x1-1/4")

## Wiring Harness

Code 35BB  
Code 35BD  
Code 35BH  
Code 35CG

5620-0122  
5620-0132

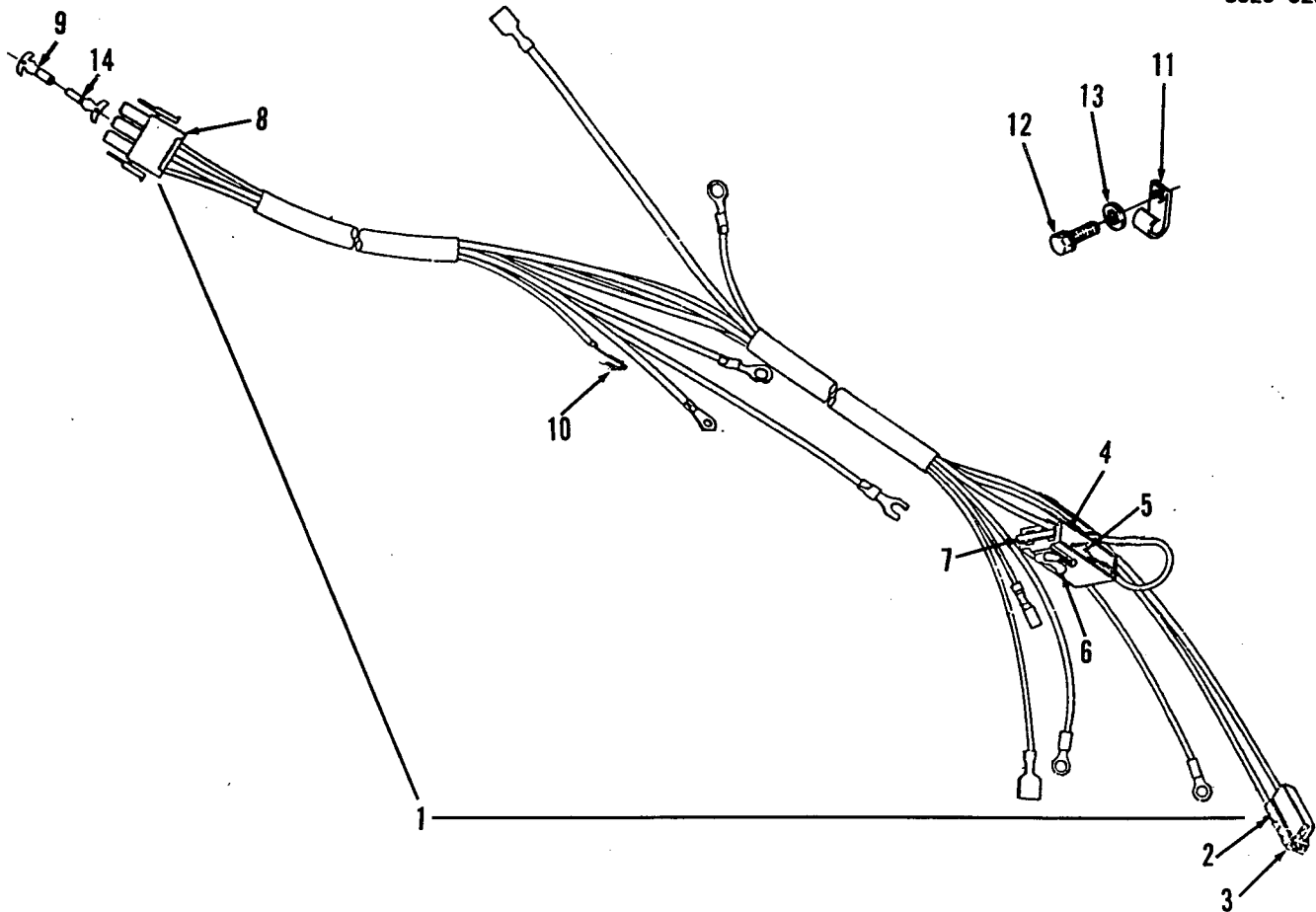


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-2075	1	Harness, Wiring - Engine	5	323-1382	1	Housing, Tab - 4 Way
	338-2162	1	4 Wire, 4 Pin Connector - Code 35BB, 35BH, 35BD - Begin Spec C	6	332-0819	1	Housing, Receptacle
	338-2390	1	4 Wire, 4 Pin Connector - Code 35BD - Lincoln Option	7	332-2301	4	20 Ampere Charging System
		1	2 Wire, 4 Pin Connector - Code 35CG		332-1503	1	35 Ampere Charging System
2	332-0806	1	Terminal, Ring(#8)	8	815-0474	1	Screw, Hex Washer Head (1/4-20 x 1/2") - Code 35BH
3	332-2715	5	Terminal, Receptacle (.250)	9	332-2973	2	Terminal, Spade
4	323-1381	1	Housing, Receptacle - 4 Way	10	518-0515	1	Clamp, Cable - Code 35BH, 39AG

# Wiring Harness Engine

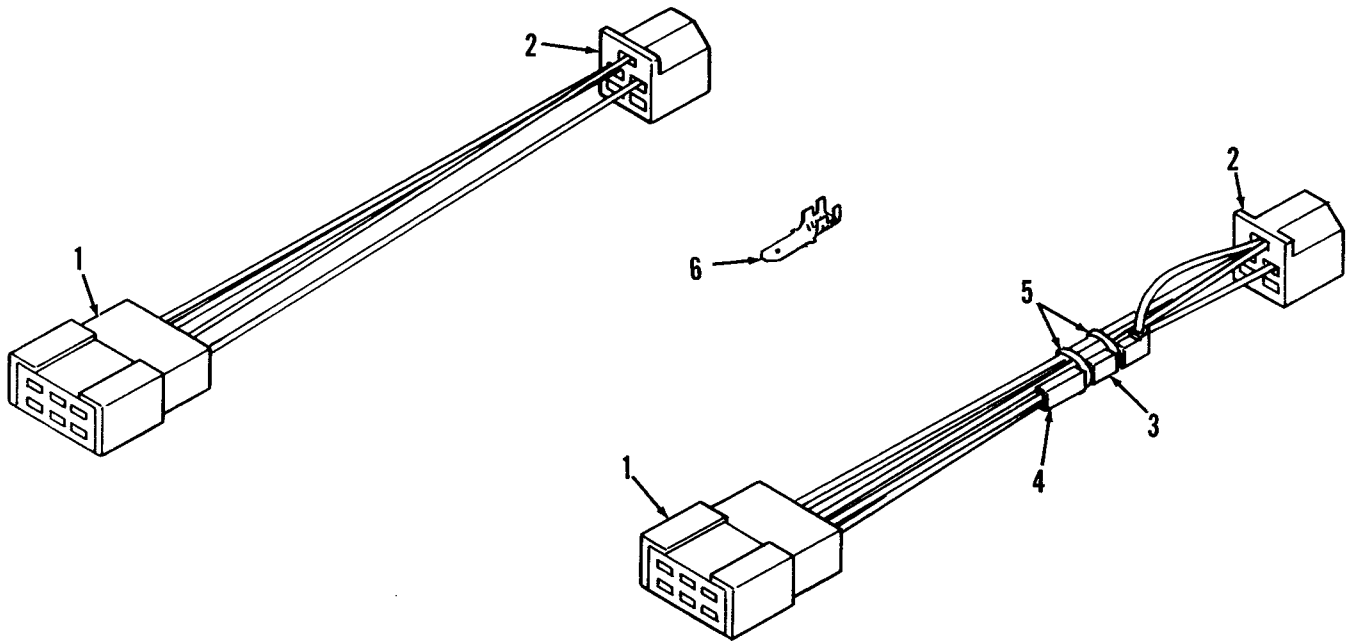
Code 35BK

5620-0203  
5620-0203-01



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-2175	1	Harness, Wiring - Engine	7	321-0291	1	Fuse, 30 Ampere - Spec B
	338-2504	1	Begin Spec B	8	323-1291	1	Cap, Connector
	338-2504	1	Begin Spec C	9	323-1200	9	Socket, Contact
2	323-1085	1	Connector, Male	10	332-0887	1	Terminal, Receptacle and Tab
3	332-2073	1	Terminal, Lock - Receptacle	11	518-0515	1	Clip, Wire
4	323-1424	1	Cap, Connector - Spec B	12	815-0474	1	Screw, Hex Washer Head (1/4-20 x 1/2")
5	332-2922	2	Terminal, Receptacle - Spec B	13	854-0014	1	Washer, Lock - IT (1/4")
6	332-2923	1	Clip, Connector - Spec B	14	323-1199	9	Pin, Contact

### Wiring Harness Control Panel

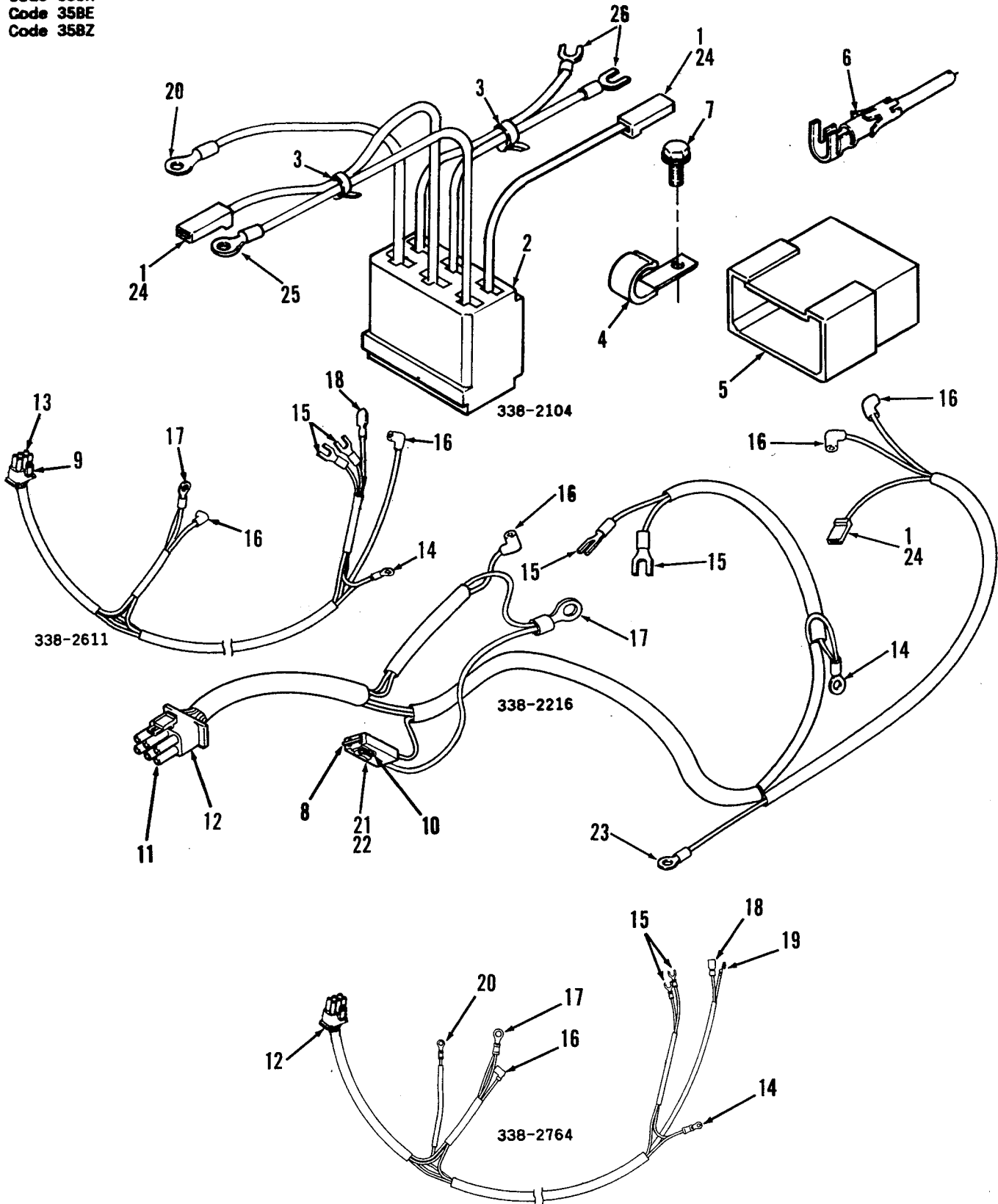


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	338-2109	1	Harness, Wiring	4	323-1216	1	Body, Connector - LOPKO
	338-2108	1	Control Panel	5	332-0942	2	Tie, Cable - LOPKO
1	323-0916	1	Lopko	6			Terminal, Tab
2	323-0987	1	Connector		332-2301	4	20 Ampere Charging System
3	357-0030	1	Body, Connector		332-1503	2	35 Ampere Charging System
			Rectifier, LOPKO				



# Wiring Harness

Code 358C  
Code 35CH  
Code 358E  
Code 358Z



## Wiring Harness

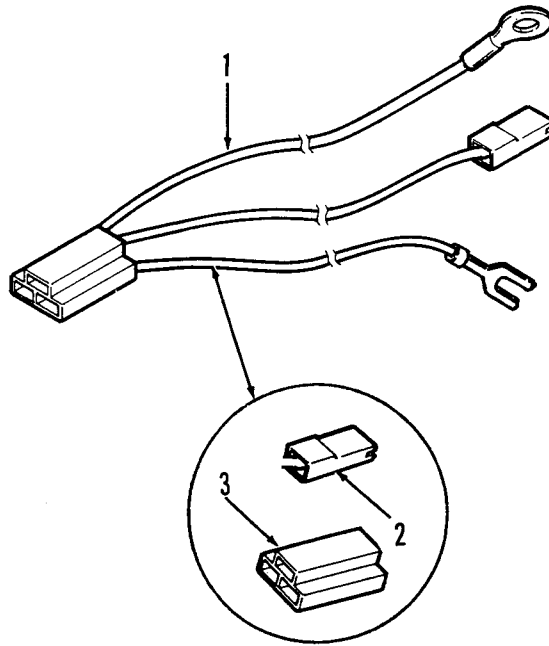
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5620-0366

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	338-2104-01	1	Harness, Wiring - Engine Units Without Pressure Switch (4 Leads) - Code 358C, 35CH	7	815-0474	1	Screw, Hex Washer Head (1/4-20 x 1/2")
	338-2104-02	1	Units With Pressure Switch (6 Leads) - Code 35BZ, 35BC	8	321-0291	1	Fuse, 30 Ampere
	338-2611	1	Miller Application Only - Code 35BE - Begin Spec C	9	323-1317	1	Plug, Connector - 6
	338-2216	1	6 Pin/30 Amp Fuse - Code 35BE	10	332-2923	1	Clip, Connector
	338-2764	1	6 Pin/Rear Interface - Code 35BE	11	323-1200	5	Socket, Contact
1	332-0819	2	Housing, Receptacle	12	323-1317	1	Plug, Connector - 6 Place
2	323-1386	1	Housing, Receptacle - 6 Way	13	323-1200	5	Socket, Contact
3	332-1567	2	Tie, Cable	14	332-1120	1	Terminal, Ring (#8)
4	518-0515	1	Clamp, Cable (1/2" Dia)	15	332-2973	2	Terminal, Spring Spade (#8)
5	323-0916	1	Housing, Connector - Tab	16	332-2572	2	Terminal, Receptacle
6	332-2301	5	Terminal, Tab	17	332-2944	1	Terminal, Ring
	332-1503	2	20 Ampere Charging System	18	332-1993	1	Terminal, Receptacle
			35 Ampere Charging System	19	332-0887	1	Terminal, Receptacle
				20	332-0806	1	Terminal, Ring
				21	323-1424	1	Cap, Connector
				22	332-2922	2	Terminal, Receptacle
				23	332-1194	1	Terminal, Ring
				24	332-2715	1	Terminal, Receptacle
				25	332-1048	1	Terminal, Ring
				26	332-1303	2	Terminal, Spade

# Wiring Harness (Interface)

Code 35AW

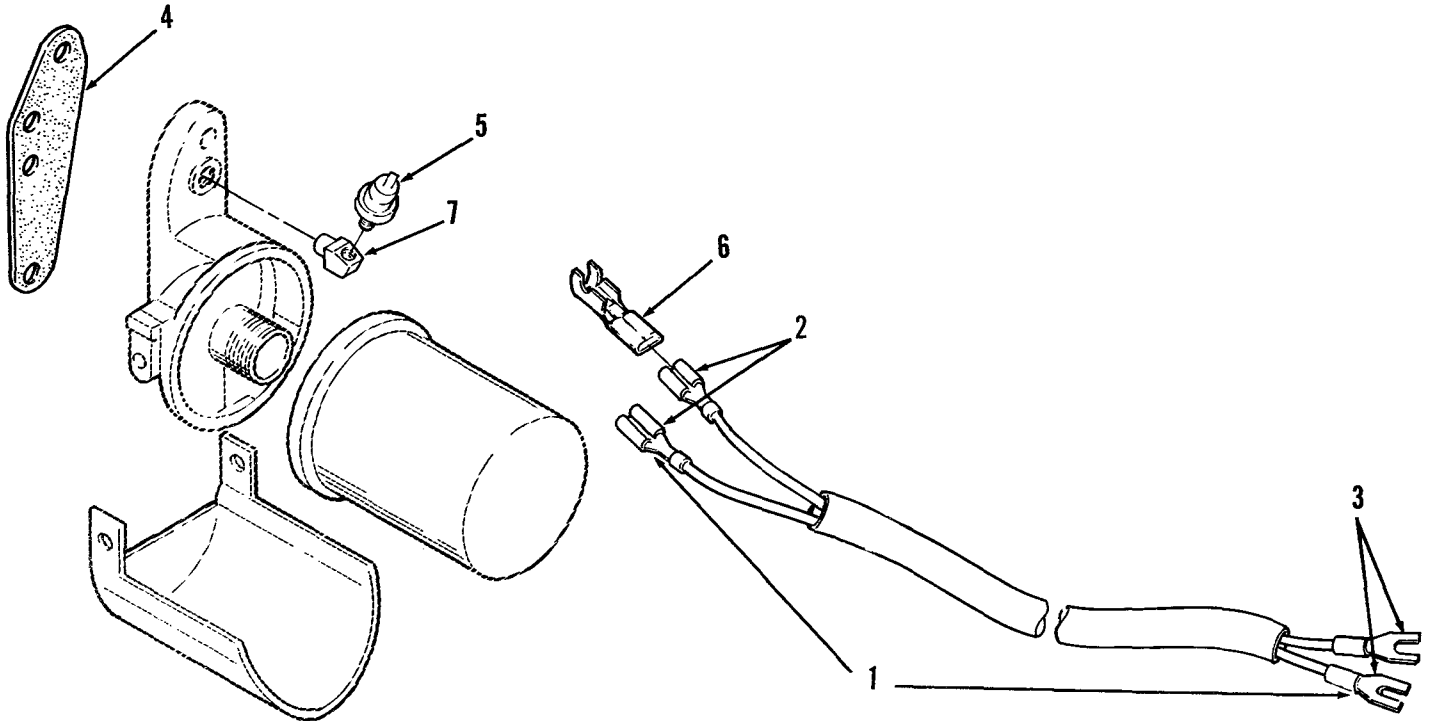
5620-0021



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-2638	1	Harness, Wiring - Interface 3 Pin	2	323-1216	1	Connector, Body
				3	323-1254	1	Connector, Body

# Wiring Harness

5620-0112

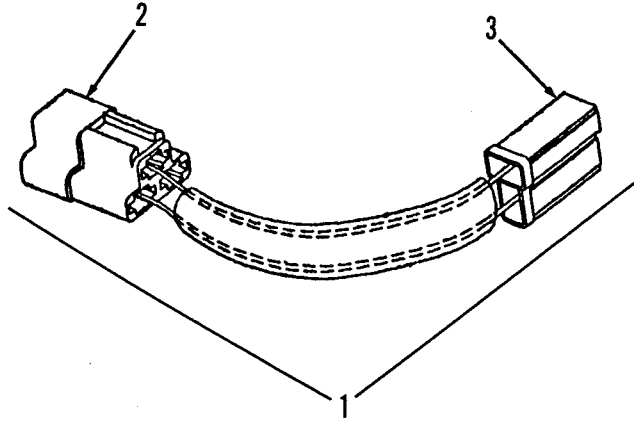


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-2211	1	Harness, Wiring - Engine Units With Pressure Switch (2 Leads)	6	332-2889	2	Tab, Faston
2	332-2890	2	Terminal, Receptacle	7	502-0053	1	Elbow, Street - 45°
3	332-1303	2	Terminal, Space (#10)				
4	122-0774	1	Gasket, Oil				
5			Switch, Low Oil Pressure				
	309-0546	1	1 Terminal - Code 35AU Normally Closed - 2.01" Long				
	309-0510	1	1 Terminal - Code 35AU Normally Closed - 1.71" Long				
	309-0105	1	2 Terminal - Code 35AV Normally Open - 1.87" Long				
	309-0558	1	2 Terminal - Code 35BW - Begin Spec C - Normally Open - 2" Long				

# Wiring Harness (Interface)

Code 47AW

5620-0386

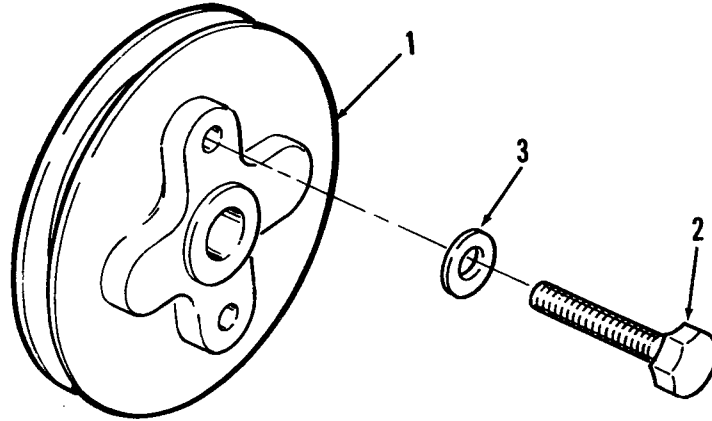


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-2174	1	Harness, Wiring				
2	323-1417	1	Body, Connector				
3	323-0892	1	Body, Connector				

# Pulley (Single Groove)

Code 45BN

5620-0082

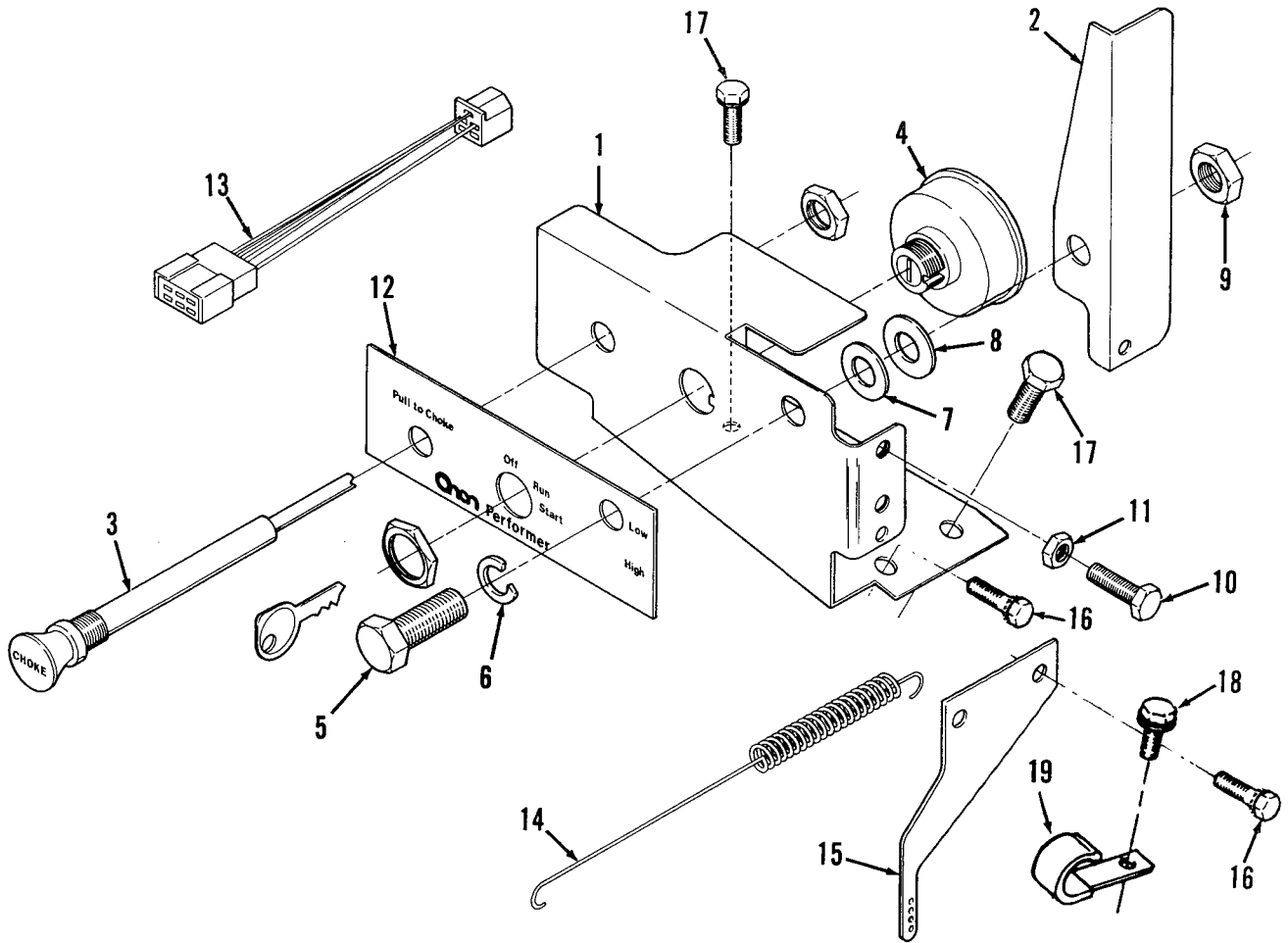


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1210	1	Pulley, Drive - Alternator	3	740-1006	4	Washer, Flat (M8)
2	800-0032	4	Screw, Cap - Hex Head (5/16-18 x 1-3/4")				

# Control Panel

Code 39AG

5620-0151-01  
5620-0151-03  
5620-0151-04  
5620-0151-06

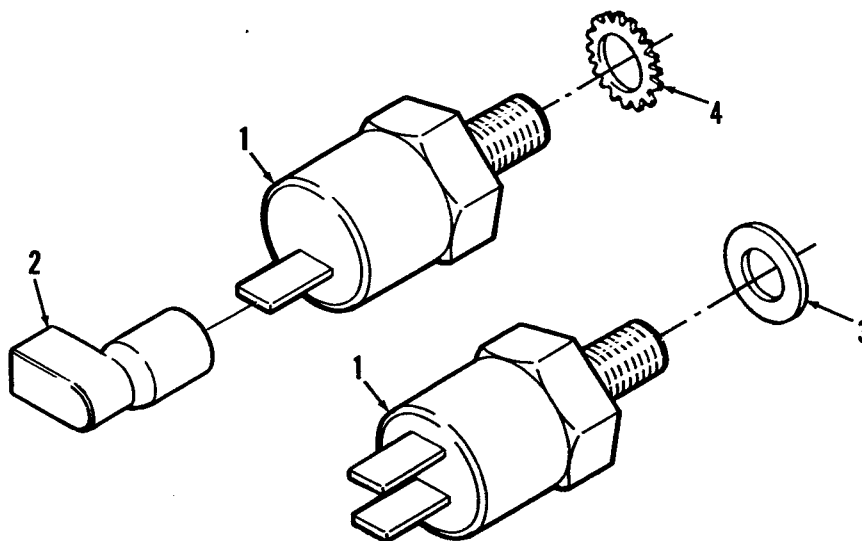


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-9964-01	1	Panel, Control	14	150-1755	1	Spring, Governor Return
2	150-2184	1	Lever, Control	15		1	Adapter, Governor Arm
3	153-0606	1	Choke, Manual		150-1754	1	Non-Plated
4	308-0385	1	Switch, Ignition (Includes Keys)		150-1754-01	1	Zinc Plated
5	800-0050	1	Screw, Cap - Hex Head (3/8-16 x 1")	16	815-0181	2	Screw, Hex Head - Thread Cutting W/ET - Panel Mounting (10-32 x 1/2")
6	851-0029	1	Washer, Lock (3/8")	17	821-0009	2	Screw, Hex Washer Head - Self-Lock (1/4-20 x 3/8")
7	526-0029	1	Washer, Flat (3/8" Screw)	18	815-0474	1	Screw, Hex Washer Head - (1/4-20 x 1/2")
8	508-0284	1	Washer, Flat - Nylon (3/8" Screw)	19	518-0515	1	Clamp, Cable
9	870-0297	1	Nut, Lock (3/8-16)				
10	815-0650	2	Screw, Hex Washer Head (1/4-20 x 1")				
11	862-0001	2	Nut, Hex (1/4-20)				
12	98-5735	1	Decal, Control Panel				
13			Harness, Wiring (See Separate Page For Components)				
	338-2109	1	Standard				
	338-2108	1	Use With LOPKO				

## High Temperature Switch Cut-Off

5620-0208  
5620-0289

Code 35BL

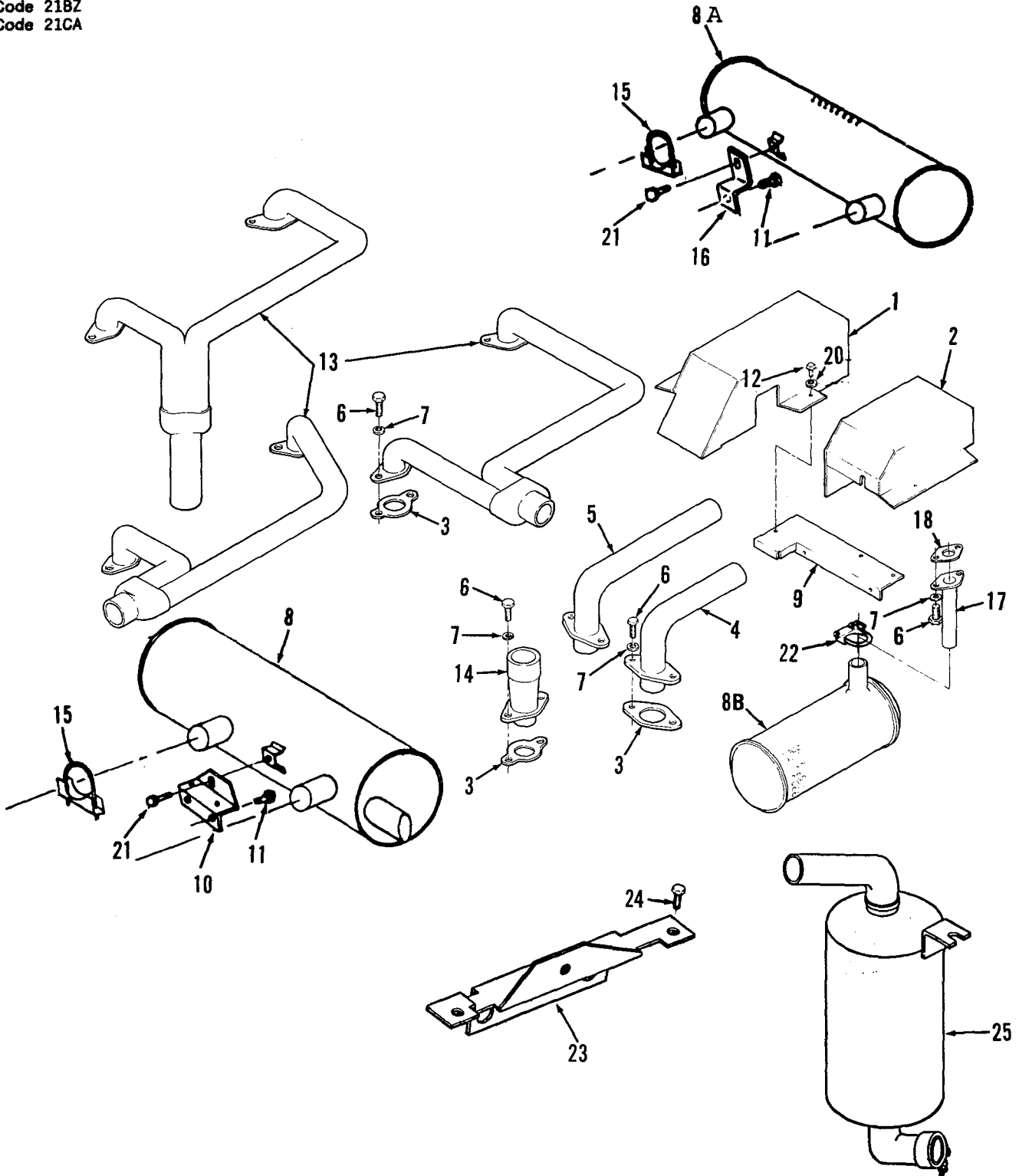


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Switch, Cut-Off - High Temperature	3	526-0021	1	Washer, Flat - 2 Terminal Switch (1/4" Screw)
	309-0559	1	1 Terminal	4	853-0013	1	Washer, Lock - External Tooth (1/4")
	309-0592	1	2 Terminal				
2	332-2572	1	Terminal, Receptacle - 90°				



# Exhaust System

- Code 21AG
- Code 21AW
- Code 21AZ
- Code 21BB
- Code 21BE
- Code 21BF
- Code 21BH
- Code 21BJ
- Code 21BK
- Code 21BM
- Code 21BW
- Code 21BZ
- Code 21CA



## Exhaust System

5620-0014  
5620-0086  
5620-0118  
5620-0150  
5620-0165-01

5620-0241-01  
5620-0247  
5620-0270  
5620-0350  
5620-0373

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-4254-50	1	Cover, Exhaust Tube - LH Code 21AW, 21BE, 21BG, 21BH, 21BJ, 21BM - Painted	10			Bracket, Muffler Support - Code 21BF, 21BM - Use with Muffler 155-2320
	134-3891	1	Code 21AZ, 21BB - Unpainted	155-2329	1	1	Unpainted
	134-3891-50	1	Code 21AZ, 21BB - Painted	155-2329-50	1	1	Painted
	134-4672-50	1	Code 21BF - Painted	11			Screw, Lock Head (3/8 x 3/4")
2	134-4655-50	1	Cover, Exhaust Tube - RH Painted	821-0029	2	2	Code 21BF
				821-0029	1	1	Use with Muffler #155-2255, 155-2321
3	154-2746	2	Gasket, Exhaust	12	821-0009	2	Screw, Self-Lock - Hex Washer Head (1/4-20 x 3/8")
4	154-2343-50	1	Adapter, Exhaust - RH 1-15/64" OD Outlet - Painted Code 21AW, 21BE, 21BJ, 21BM	13			- Code 21BB, 21BE, 21BM, 21BH Manifold, Exhaust
	154-2128-50	1	1-1/4" OD Outlet - Painted Code 21AZ, 21BB	154-2178-50	1	1	Rear Right Down
	154-2709	1	1.405" OD Outlet Code 21BF	154-2243-50	1	1	Rear Outlet
				154-2613-50	1	1	Right Outlet
5	154-2344	1	Adapter, Exhaust - LH 1-15/64" OD Outlet Code 21AW, 21BE, 21BJ, 21BM	541-0377	1	1	Crossover - Code 21BG, 21BH
	154-2129	1	1-1/4" OD Outlet - Unpainted Code 21AZ, 21BB	14	154-1958	2	Adapter, Exhaust (Flange Type) - Code 21AG
	154-2129-50	1	1-1/4" OD Outlet - Painted Code 21AZ, 21BB, 21BD	15	155-1257	2	Clamp, Muffler - (1-3/8" Dia)
	154-2710	1	1.405" OD Outlet Code 21BF	16	155-2302-01	1	Support, Muffler - Use with Muffler 155-2255, 155-2321
6	800-0026	4	Screw, Cap Hex Head (5/16-18 x 3/4")	17	154-2713-50	2	Adapter, Exhaust Manifold - Painted - 4-1/4" Long - Code 21AG, 21BZ
7	850-0045	4	Washer Lock 5/16" - Code 21BJ, 21BK, 21BW	18	154-2747	2	Gasket, Exhaust Manifold
	740-1006	4	Flat (M8) - All Others	19	800-0512	4	Screw, Cap - Hex Head (5/16-18 x 1")
8	155-2320	1	Muffler, Exhaust - 16.55" Long	20	850-0045	2	Washer, Lock - Code 21BH (3/8")
8A	155-2255	1	Muffler, Exhaust - 2 Inlets Mounts Horizontal Rear, Center Exhaust - 15" Long	21	821-0014	1	Screw, Lock Head (5/16-18 x 1/2")
	541-0379	1	End, Discharge Tube - 16" Long - P216, P220	22	155-1256	2	Clamp, Muffler (1-1/8")
8B	155-2300	2	Muffler (Use in Pairs) - Use With Adapter 154-2713	23	155-2264-50	1	Bracket, Muffler Support - Code 21BF - Painted
9	134-3905	1	Support, Exhaust Cover Code 21BB - Unpainted	24	821-0008	2	Screw, Lock Head (1/4-20 x 5/16") Code 21BF
	134-3905-50	1	Code 21BB - Painted	25	155-2521	1	Muffler, Exhaust - Single Inlet - Mounts Vertically - P216, P220
	134-4445-50	1	Code 21BG, 21BH, 21BE - Painted				

## Labels, Paint, Thread Sealant and Gasket Kits

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	98-6163-01	3	Label, Performer - P216 (Red and White)	168-0189		1	Kit, Gasket - Carbon Removal (Includes Parts Marked +)
	98-6163-02	3	Label, Performer - P216 (XSL*) (Red and White)	110-3709		3	+Gasket, Valve Box
	98-6164-01	3	Label, Performer - P218 (Red and White)	110-3181		2	+Gasket, Cylinder Head
	98-6164-02	3	Label, Performer - P218 (XSL*) (Red and White)	154-2746		2	+Gasket, Exhaust Manifold
	98-6165-01	3	Label, Performer - P220 (Red and White)	154-2495		2	+Gasket, Intake Manifold
	98-6165-02	3	Label, Performer - P220 (XSL*) (Red and White)	509-0210		2	+Seal, Valve Stem
	98-5968	1	Label, Air Cleaner - Maintenance	168-0187		1	Kit, Gasket - Complete Engine (Includes Parts Marked †)
	98-5969-01	1	Label, Periodic - Maintenance	101-0782		1	†Gasket, Rear Bearing Plate
	98-5969-02	1	Standard Oil Base - No Oil Filter	102-0743		1	†Gasket, Oil Drain
	98-5969-03	1	Standard Oil Base - With Oil Filter	103-0810		1	†Gasket, Gearcase
	98-5969-04	1	High Capacity Oil Base - With Oil Filter	110-3709		3	†Gasket, Valve Box
	518-0452	1	Extra High Capacity Oil Base with Oil Filter	110-3181		2	†Gasket, Cylinder Head
	518-0347	1	Sealant, Thread (50cc Bottle)	120-0161		1	†Gasket Kit, Oil Pump
	525-0305	1	Loctite, Bottle (250cc)	122-0771		1	†Gasket, Oil Filter Adapter
	525-0454	1	Paint, Enamel Touch-Up Green(Non-Metallic) 13 Ounce Pressurized Can	154-0733		1	†Gasket, Adapter to Carburetor
	525-0394	1	Paint, Enamel Touch-Up - Flat Black - 16 Ounce Pressurized Can	154-2495		2	†Gasket, Intake Manifold
				154-2746		2	†Gasket, Exhaust Manifold
				160-1368		1	†Gasket, Breaker Box
				509-0008		1	†Seal, Oil (Governor Shaft)
				509-0040		1	†Seal, Oil (Gearcase)
				509-0041		1	†Seal, Oil (Bearing Plate)
				509-0142		1	†O-Ring (Oil Fill Cap)
				509-0145		1	†O-Ring (Air Cleaner to Carburetor)
				509-0210		2	†Seal, Valve Stem
				102-1397		1	†Gasket, Oil Base
				509-0269		1	†Seal, Fill Tube

\* - Extended Service Life

+ - Parts Included in 168-0189 Gasket Kit.

† - Parts Included in 168-0187 Gasket Kit.

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166-0767	18	191-1947	42	323-1317	51	338-2104-02	51
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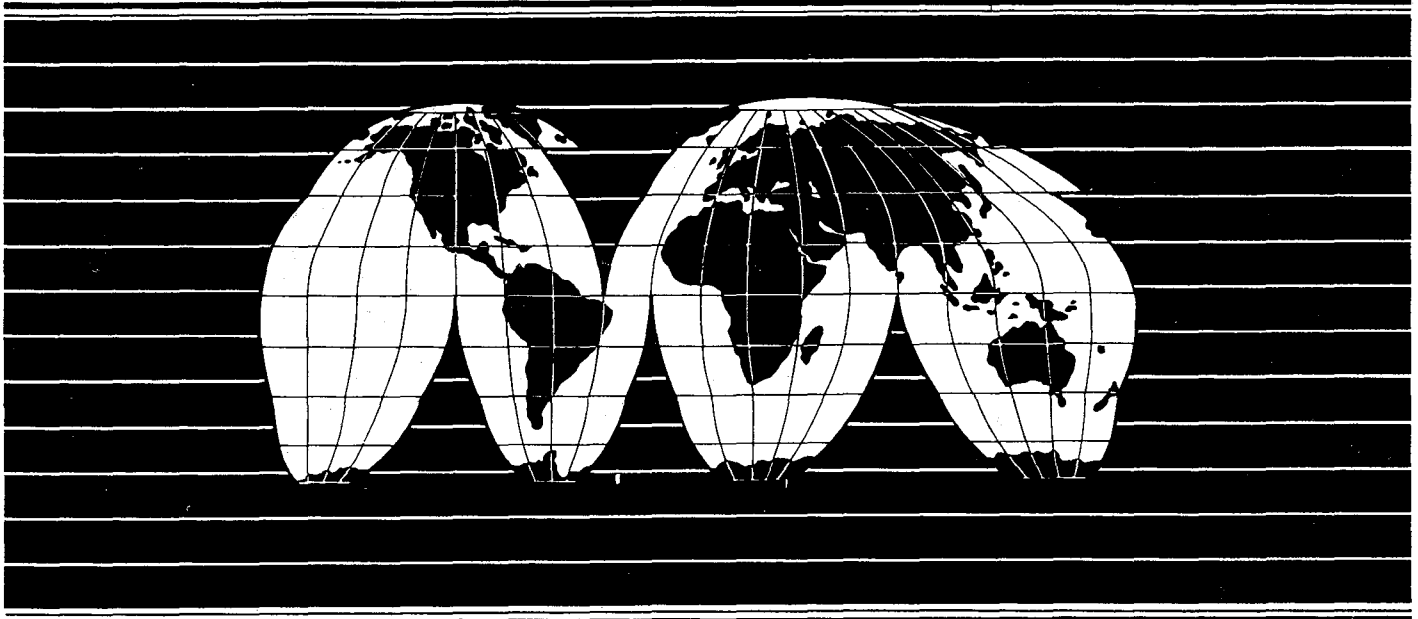




Onan Corporation  
1400 73rd Avenue N.E.  
Minneapolis, MN 55432

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# World Wide Parts and Service



Telephone: 1-800-888-ONAN  
Telex: 275477  
Cable: ONAN

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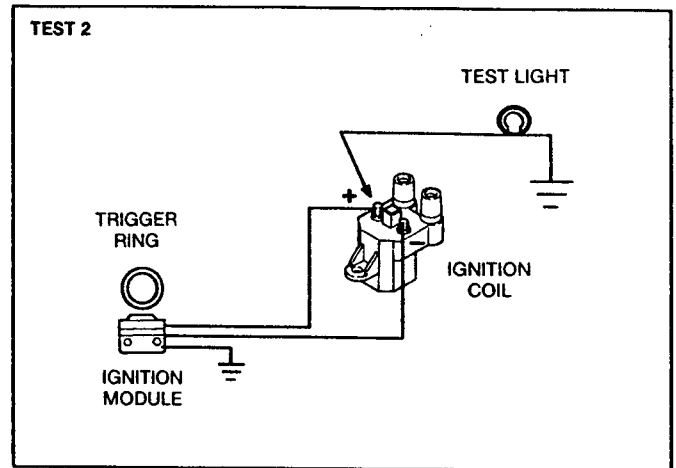
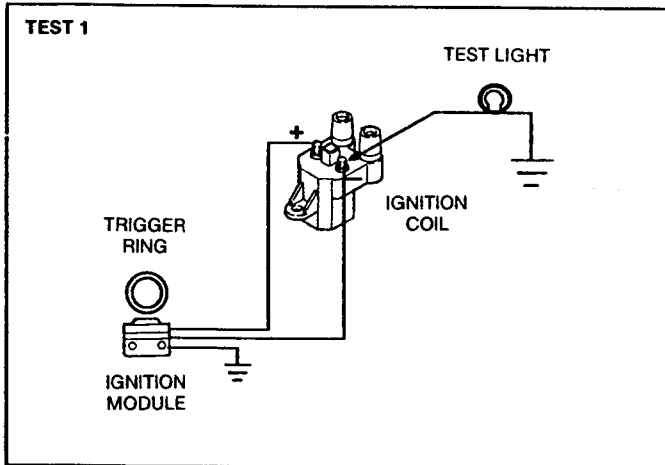


## Troubleshooting Electronic Ignition Module

**▲WARNING**

*Use extreme caution when working on operating equipment. Operating equipment presents hazards of electrocution, burns, fire and explosion, asphyxiation, and entanglement with rotating parts. Review Important Safety Instructions in Operator's Manual.*

**Models: Performer™, Emerald Plus™, Marquis™, Ensign™**

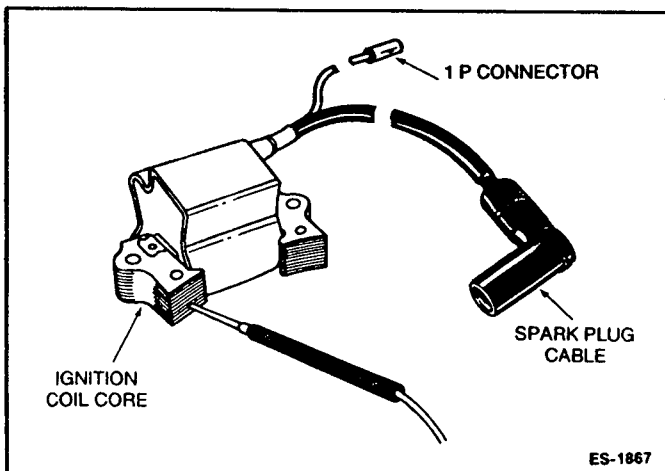


1. Check wiring: red lead to positive (+); black lead to negative (-).
2. Connect a DC powered test light from the negative (-) coil terminal to ground.
3. Turn the ignition switch on and crank the engine over. Does the test light flash, bright then dim?  
Yes - The module is ok, do not replace the module.  
No - Go to Test 2.

**NOTE:** If the primary winding of the ignition coil is open, the light will not come on.

1. Connect the test light from the positive (+) coil terminal to ground.
2. Turn the ignition switch to the on position. Does the light come on?  
Yes - Crank the engine over. Does the light stay on while cranking?  
Yes - Replace the module and the trigger ring as a set if the coil tests good.  
No - It is not a module problem. Check the wiring and connections to the coil and the ignition switch, then retest the module.

**Model: ELITE™**



1. Disconnect the IP connector at the module.
2. Disconnect the spark plug lead from the spark plug.
3. Measure the primary coil resistance across the IP connector and the coil core. Primary resistance should be 1.0 Ohm.
4. Measure the secondary resistance across the spark plug cable and the coil core secondary resistance should be 9.5K Ohm.
5. If primary and secondary measurements are not as specified, replace the ignition module.

**NOTE:** IGNITION MODULE TO FLYWHEEL MAGNET CLEARANCE. Measure the clearance between the ignition coil core and the flywheel magnet. If the measurement is not .020, loosen the module mounting screws and move the module to obtain .020 clearance.

**Onan SERVICE TEAM**

CPP Industriestrasse 21 - 23  
5190 Mausbach-Stolberg  
Tel. 02402/71097-98  
Fax 02402/75552

Essenlaan 5 bus 4  
3600 Genk-Belgium  
Tel. : 011/38.48.32  
Telex : 39033  
Telefax : 011/38.67.28

# Engine Electrical Systems Worksheet

**⚠ WARNING**

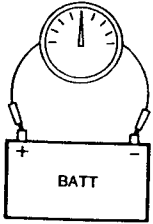
Use extreme caution when working on operating equipment. Operating equipment presents hazards of electrocution, burns, fire and explosion, asphyxiation, and entanglement with rotating parts. Review Important Safety Instructions in Operator's Manual.

## Engine ID

Model \_\_\_\_\_

Serial No \_\_\_\_\_

## Battery



Battery Voltage Measured

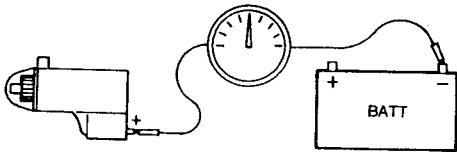
\_\_\_\_\_ VDC Static  
 \_\_\_\_\_ VDC Cranking

Service Manual Spec

\_\_\_\_\_ 12.7 to 13.6 VDC

Specific gravity should be 1.260 at 77°F (25°C)

## Starter

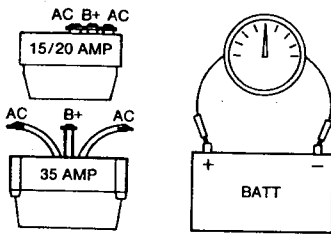


Starter Voltage Measured

\_\_\_\_\_ VDC Static (Ignition key to "ON" position)  
 \_\_\_\_\_ VDC Cranking

VDC cranking must be 8 VDC minimum

## Voltage Regulator



Terminals:  Clean

Corroded

Dirty

Battery Voltage Measured

\_\_\_\_\_ VDC Static  
 \_\_\_\_\_ VDC Running

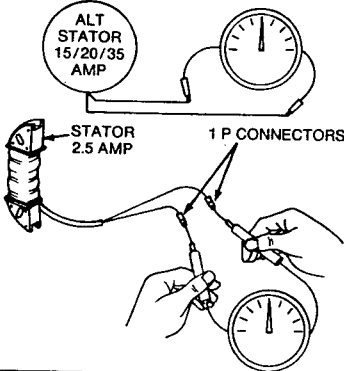
Service Manual Spec

\_\_\_\_\_ VDC Static

\_\_\_\_\_ VDC Running

## Stator

MOUNTED BEHIND BLOWER WHEEL



15, 20, 35 AMP STATOR

\_\_\_\_\_ VAC @ 1800 rpm  
 \_\_\_\_\_ VAC @ 3600 rpm

Service Manual Spec

\_\_\_\_\_ VAC @ 1800 rpm

\_\_\_\_\_ VAC @ 1800 rpm

Static Test

\_\_\_\_\_ Ohms resistance

\_\_\_\_\_ Ohms resistance

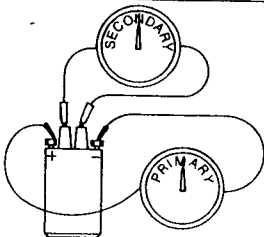
2.5 AMP STATOR

Static Test

\_\_\_\_\_ Ohms resistance

\_\_\_\_\_ 0.33 Ohms resistance

## Coil



PRIMARY RESISTANCE

\_\_\_\_\_ Ohms

Service Manual Spec

\_\_\_\_\_ Ohms

SECONDARY RESISTANCE

\_\_\_\_\_ Ohms

\_\_\_\_\_ Ohms

THIS FORM MAY BE PHOTOCOPIED - SEE OTHER SIDE FOR IGNITION.