

HFR-2B to HFRR-2B CONVERSION  
**TITLE**

**MODEL KIT 233**

<b>MODEL</b>	<b>USED ON SECTION</b>	<b>QTY</b>
HFR-2B CONVERSION		1

**LIST SECTIONS**

- 1.SUPPORTING NOTES
- 2.SUPPORTING LISTS
- 3.ELECTRICAL/MECHANICAL
- 4.SUPP ASSY/REF DWGS
- 5.SPECIFICATIONS
- 6.LOOSE ITEMS
- 7.PARTS PECULIAR

**SHEET NO.**  
**SEE BELOW**

1-7  
 7  
 8

**LAST SYMBOLS**

B1002  
 G1001  
 J1316  
 L1063  
 MP1001  
 P1007  
 S1007

**COMPILED** L. GABEL 5-20-65  
**CHECKED** L. GABEL  
**APPROVED** O. POSE  
**FNL APPR** *L. Gabel*  
**ISS DATE** 6-5-65

**MISSING SYMBOLS**

N/A

NOTE 1. THE FOLLOWING SYMBOL, #, IN THE REMARKS COLUMN INDICATES THAT THE PART NUMBER IMMEDIATELY FOLLOWING IT IS THE TMC PROPRIETARY MANUFACTURING DRAWING FOR THE CORRESPONDING NUMBER IN THE PART NUMBER COLUMN.

**MATERIAL LIST /  
NUMERICAL PARTS LIST**

REV.

MODEL:KIT 233

SHEET 1 OF 8

PART NO.	DESCRIPTION ELECTRICAL/MECHANICAL	ITEM LOCATION			QTY. PER UNIT	REFERENCE SYMBOLS	REMARKS
		USED ON ASSEMBLY	USED TO MOUNT	QTY. PER USED TO MOUNT			
BS100	SOLDER, TIN ALY	A3745 CA892 CA930					
BB126-6	BRG, BALL, ANNL	KIT 233			3		
BB126-10	BRG, BALL, ANNL	KIT 233			2		
BB126-15	BRG, BALL, ANNL	KIT 233			1		
CD101-1MW	CD. NYLON, LACING	A3745 CA892 CA930 KIT 233			30		
CU102-4	CLAMP, LOOP	KIT 233			1		
CU102-5	CLAMP, LOOP	KIT 233			3		
CU142-6-9	STRAP, CBL, ADJ	KIT 233			7		
CU155-1	RET., MOTOR	KIT 233			3		
CU155-2	RET., MOTOR	KIT 233			8		
CZ100	CLUTCH, MAGNETIC	A3614			1	MP1001	
FW02HSS	WASH., FLAT	KIT 233			8		
FW06HBN	WASH., FLAT	KIT 233			3		
GN100	GEN, TACH	KIT 233			1	G1001	

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, NEW YORK

**MATERIAL LIST /  
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REV.

MODEL: KIT 233

SHEET 2 OF 8

PART NO.	DESCRIPTION ELECTRICAL/MECHANICAL	ITEM LOCATION			QTY. PER UNIT	REFERENCE SYMBOLS	REMARKS
		USED ON ASSEMBLY	USED TO MOUNT	QTY. PER USED TO MOUNT			
GR205-1	GEAR, SPUR	A4172			1		
GR205-3	GEAR, SPUR	A4171			1		
GR205-17	GEAR, SPUR	A4172			1		
GR206-1	GEAR, SPUR	A3601			1		
GR206-3	GEAR, SPUR, HUB	A3614			1		
JJ242-6S	CONN, RECP, FML	CA892			2	J1314, 1315	
JJ313-3	CONN, RECP, ML	CA892			1	J1316	
LWE02MRN	WASH., LK, EXT	KIT 233			6		
LWE04MRN	WASH., LK, EXT	KIT 233			15		
LWE04MSS	WASH., LK, EXT	KIT 233			2		
LWE06MSS	WASH., LK, EXT	KIT 233			3		
LWS04MSS	WASH., LK, SPLIT	KIT 233			2		
MO122-2	MOTOR, AC	KIT 233			1	B1002	
MO123	MOTOR, CONTROL	KIT 233			1	B1001	
MS3796	PL, MTG, CONN	CA892			1		
MS3797	PL, MTG, CONN	CA892			1		
MWC20/7/U90	WIRE, ELEC, INS	CA892			20		

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REV.

MODEL: KIT 233

SHEET 3 OF 8

PART NO.	DESCRIPTION ELECTRICAL/MECHANICAL	ITEM LOCATION			QTY. PER UNIT	REFERENCE SYMBOLS	REMARKS
		USED ON ASSEMBLY	USED TO MOUNT	QTY. PER USED TO MOUNT			
MWC20/7/U98	WIRE,ELEC,INS	CA892			50		
MWC22/7/SJ9	CBL,SP,SHLD/JKT	CA892			24		
NTH0440SS8	NUT,PLN,HEX	KIT 233			2		
PL225-6P	CONN,PL,ML-20/C	KIT 233			2	P1006,1007	
PM1044	ARM,SW ACTR	KIT 233			1		
PM1050RF2.437	SHAFT,STR	A3601			1		
PM1051RF1.437	SHAFT,STR-1/4D	A4171			1		
PM1051RF2.437	SHAFT,STR-1/4D	A4172			1		
PM1057	PL,SWITCH	KIT 233			1		
PM1058	PL, SWITCH	KIT 233			1		
PM1062-1	COLLAR,SHAFT	A3614			1		
PM1062-2	COLLAR,SHAFT	A3601			2		
PM1062-3	COLLAR,SHAFT	KIT 233			3		
PN59-062-6	PIN,SPRING	A4171		1			
		A4172		2	3		
PN59-062-8	PIN,SPRING	KIT 233			1		
PX100-1-118	INS SLVG-SZ9	KIT 233			15		
PX100-1-133	INS SLVG-SZ8	KIT 233			20		
PX100-1-234	INS SLVG-SZ3	KIT 233			19		
PX100-1-375	INS SLVG-SZ3/8	KIT 233			3		



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MODEL: KIT 233

SHEET 4 OF 8

PART NO.	DESCRIPTION ELECTRICAL/MECHANICAL	ITEM LOCATION			QTY. PER UNIT	REFERENCE SYMBOLS	REMARKS
		USED ON ASSEMBLY	USED TO MOUNT	QTY. PER USED TO MOUNT			
PX830-14-1	INS SLVG,SHRINK	CA892			24		
PX830-18-1	INS SLVG-SHRINK	CA892 KIT 233		60 18	36 78		
SCBP0256SS3	SCR,MACH	KIT 233			4		
SCBP0256SS4	SCR,MACH	KIT 233			4		
SCBP0440SS5	SCR,MACH	KIT 233			14		
SCFP0440SS13	SCR,MACH	KIT 233			2		
SCFP0632SS6	SCR,MACH	KIT 233			4		
SCFP1032SS10	SCR,MACH	KIT 233			8		
SLHF0440SS2	SETSCREW	KIT 233			6		
SW347	SW,PUSH-DPDT	KIT 233			1	S1006	
SW353-2	SW,SENS ,W/ACTR	KIT 233			2	S1004,1005	
SZ101	SOL. ,ELEC	KIT 233			1	L1063	
TE120-2	TERM. ,LUG-SPADE	CA930			1		
WI140B22N0	WIRE ,ELEC ,INS	CA892 CA930		24 22	24 46		
WI140B22N2	WIRE ,ELEC ,INS	CA892 CA930		24 30	24 54		

**MATERIAL LIST /  
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REV.

MODEL: KIT 233

SHEET 5 OF 8

PART NO.	DESCRIPTION ELECTRICAL/MECHANICAL	ITEM LOCATION			QTY. PER UNIT	REFERENCE SYMBOLS	REMARKS
		USED ON ASSEMBLY	USED TO MOUNT	QTY. PER USED TO MOUNT			
WI140B22N7	WIRE ,ELEC , INS	CA892		13	13		
		KIT 233		15	28		
WI140B22N8	WIRE ,ELEC , INS	CA892			24		
WI140B22N94	WIRE ,ELEC , INS	CA892		20	14		
		KIT 233		15	35		
WI140B22N97	WIRE ,ELEC , INS	KIT 233			15		
WI140B22N843	WIRE ,ELEC , INS	CA892			24		
WI140B22N844	WIRE ,ELEC , INS	CA892			24		
WI140B22N845	WIRE ,ELEC , INS	CA892			24		
WI140B22N846	WIRE ,ELEC , INS	CA892			24		
WI140B22N854	WIRE ,ELEC , INS	CA892			24		
WI140B22N855	WIRE ,ELEC , INS	CA892			24		
WI140B22N856	WIRE ,ELEC , INS	CA892			24		
WI140B22N873	WIRE ,ELEC , INS	CA892			20		
WI140B22N874	WIRE ,ELEC , INS	CA892			53		
WI140B22N900	WIRE ,ELEC , INS	CA892			14		
WI140B22N923	WIRE ,ELEC , INS	A3745		17	17		
		CA892		20	37		

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MODEL: KIT 233

SHEET 6 OF 8

PART NO.	DESCRIPTION ELECTRICAL/MECHANICAL	ITEM LOCATION			QTY. PER UNIT	REFERENCE SYMBOLS	REMARKS
		USED ON ASSEMBLY	USED TO MOUNT	QTY. PER USED TO MOUNT			
WI140B22N924	WIRE ,ELEC , INS	A3745		17	17		
		CA892		20	37		
WI140B22N925	WIRE ,ELEC , INS	A3745		17	17		
		CA892		20	37		
WI140B22N926	WIRE ,ELEC , INS	A3745		17	17		
		CA892		20	37		
WI140B22N933	WIRE ,ELEC , INS	CA892		24	24		
		CA930		15	39		
WI140B22N935	WIRE ,ELEC , INS	CA892		24	24		
		CA930		21	45		
WI140B22N943	WIRE ,ELEC , INS	CA892		24	24		
		CA930		15	39		
WI140B22N944	WIRE ,ELEC , INS	A3745		17	17		
		CA892		20	37		
WI140B22N945	WIRE ,ELEC , INS	CA892		24	24		
		CA930		21	45		
WI140B22N946	WIRE ,ELEC , INS	CA892		20	20		
		KIT 233		15	35		
WI140B22N963	WIRE ,ELEC , INS	A3745		17	17		
		CA892		20	37		
WI140B22N964	WIRE ,ELEC , INS	A3745		17	17		
		CA892		20	37		
WI140B22N965	WIRE ,ELEC , INS	A3745		17	17		
		CA892		20	37		



**MATERIAL LIST /  
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REV.

MODEL: KIT 233

SHEET 7 OF 8

PART NO.	DESCRIPTION ELECTRICAL/MECHANICAL	ITEM LOCATION			QTY. PER UNIT	REFERENCE SYMBOLS	REMARKS
		USED ON ASSEMBLY	USED TO MOUNT	QTY. PER USED TO MOUNT			
WI140B22N966	WIRE ,ELEC ,INS	A3745		17	17		
		CA892		20	37		
WL100-7	WIRE ,ELEC ,BUSS	A3745			4		
WS133	SW SECT. ,ROT.	A3745			1	S1007	
	SUPP ASSY/REF DWGS						
A3601	GEAR ASSY ,IDLER	KIT 233			1		
A3614	CLUTCH/GEAR ASSY	KIT 233			1		
A3624/DWG ONLY	TUN.GEAR-MAN.	KIT 233			1		
A3625/DWG ONLY	TUN.GEAR SUBASSY	KIT 233			1		
A3745	SW/WRG ASSY	KIT 233			1		
A3747/DWG ONLY	TUN.GEAR-AUTO	KIT 233			1		
A4168/DWG ONLY	BND SW GEAR ASSY	KIT 233			1		
A4171	GEAR ASSY	KIT 233			1		
A4172	GEAR ASSY	KIT 233			1		
CA892	WRGHARN ,BRCHD	KIT 233			1		
CA930	WRG HARN ,BRCHD	KIT 233			1		



**MATERIAL LIST /  
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REV.

MODEL: KIT 233

SHEET 8 OF 8

PART NO.	DESCRIPTION SPECIFICATIONS	ITEM LOCATION			QTY. PER UNIT	REFERENCE SYMBOLS	REMARKS
		USED ON ASSEMBLY	USED TO MOUNT	QTY. PER USED TO MOUNT			
S104	PASSIVATE	GR206-1 GR206-3 PM1062					
S	INST INSTR	KIT 233			1		