

**NIDEC MOTOR CORPORATION**

8050 WEST FLORISSANT AVE.  
ST. LOUIS, MO 63136



**DATE:** 6/4/2013

**P.O. NO.:** DR43  
**Order/Line NO.:** 21942 MN 100

**TO:**

**Model Number:** DR43  
**Catalog Number:**  
Unimount Pre. Eff. Config.  
CONF,MOTOR,UNIMOUNT PRE EFF

**REVISIONS:**  
(NONE)

**ALL DOCUMENTS HEREIN ARE CONSIDERED CERTIFIED BY NIDEC MOTOR CORPORATION.  
THANK YOU FOR YOUR ORDER AND THE OPPORTUNITY TO SERVE YOU.**

**Features:**

Horsepower ..... 00007.50 ~ KW: 5.595  
Enclosure ..... TEFC  
Poles ..... 04 ~ RPM: 1800  
Frame Size ..... 213~TC  
Phase/Frequency/Voltage.. 3~060~230/460 ~ Random Wound  
Service Factor ..... 1.25  
Insulation Class ..... Class "F" ~ Insulife 1000  
Altitude In Feet (Max) .. 3300 Ft.(1000 M)  
Ambient In Degree C (Max) +40 C  
Assembly Position ..... F1, Ftls, Flng Mnt, Shaft Horz  
Efficiency Class ..... Premium Efficiency  
Application ..... Unknown  
Customer Part Number ....  
"AK" Dimension (Inches).. 8.500  
Temperature Rise (Sine Wave): "B" Rise @ 1.0 SF (Resist)  
Starting Method ..... Direct-On-Line Start  
Duty Cycle ..... Continuous Duty  
Efficiency Value ..... 89.5 % ~ Typical  
Load Inertia (lb-ft<sup>2</sup>): NEMA ~ NEMA Inertia: 39.20 ~ 1.00  
Number Of Starts Per Hour: NEMA  
Motor Type Code ..... UTEF  
Rotor Inertia (LB-FT<sup>2</sup>) .766 LB-FT<sup>2</sup>  
Qty. of Bearings PE (Shaft) 1  
Qty. of Bearings SE (OPP) 1  
Bearing Number PE (Shaft) 6208-2Z-J/C3  
Bearing Number SE (OPP) 6206-2Z-J/C3

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**Accessories:**

Shaft Slinger - Pulley End  
Footless (Round Frame)  
Horizontal Lifting Lugs

.  
Product Family .....  
Reserved for future use  
Reserved for future use  
Reserved for future use  
Reserved for future use  
Reserved for future use  
Reserved for future use  
Reserved for future use NA  
Reserved for future use NA  
Standard Leadtime: 8-9 WEEKS  
Est. Weight (lbs ea): 105 ~ F.O.B.: Monterrey, Mexico

**USE THE DATA PROVIDED BELOW TO SELECT THE APPROPRIATE DIMENSION PRINT**

**Horsepower** 7.5  
**Pole(s)** 04  
**Voltage(s)** 460-230  
**Frame Size** 213TC  
**Shaft U Diameter** 1.375  
**Outlet Box AF** 2.13  
**Outlet Box AA** 1.00

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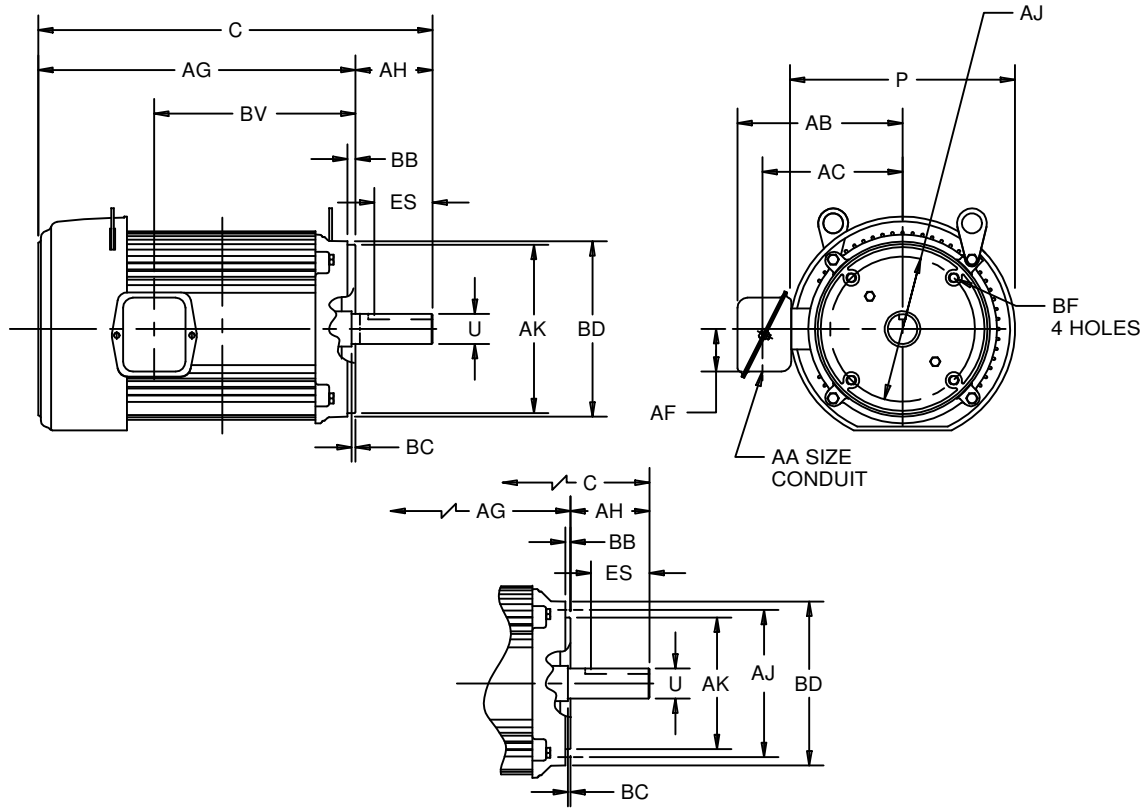
EFFECTIVE:  
**13-APR-11**

SUPERSEDES:  
**19-MAR-04**

**HORIZONTAL MOTORS**  
TEFC - FOOTLESS WITH "C" FACE  
FRAME: 182 THRU 215TC  
BASIC TYPE: UT

PRINT:  
**07-2030**

SHEET:  
**1 OF 1**



FOR FRAMES  
182TCH AND 184TCH

ALL DIMENSIONS ARE IN INCHES AND MILLIMETERS

FRAME	UNITS	P <sup>2</sup>	T	U -.0005	AA	AB	AC	AF	AH	BC	ES MIN	SQ KEY
180	IN	9.56	.38	1.1250	.75	7.50	6.31	2.13	2.63	.13	1.78	.250
	MM	243	10	28.575		191	160	54	67	3	45	6.35
210	IN	11.25	.38	1.3750	1.00	8.25	7.09	2.13	3.13	.25	2.41	.313
	MM	286	10	34.925		210	180	54	80	6	61	7.95

FRAME	UNITS	C	AG	AJ	AK -.003	BB MIN	BD MAX	BF <sup>3</sup>	BV
182TC	IN	16.13	13.50	7.250	8.500	.25	9.00	1/2-13 X .75	8.44
	MM	410	343	184.15	215.90	6	229		214
182TCH	IN	16.13	13.50	5.875	4.500	.16	6.50	3/8-16 X .56	8.44
	MM	410	343	149.23	114.30	4	165		214
184TC	IN	16.88	14.25	7.250	8.500	.25	9.00	1/2-13 X .75	9.19
	MM	429	362	184.15	215.90	6	229		233
184TCH	IN	16.88	14.25	5.875	4.500	.16	6.50	3/8-16 X .56	9.19
	MM	429	362	149.23	114.30	4	165		233
213TC	IN	18.63	15.50	7.250	8.500	.25	9.00	1/2-13 X .75	9.94
	MM	473	394	184.15	215.90	6	229		252
215TC	IN	20.13	17.00	7.250	8.500	.25	9.00	1/2-13 X .75	11.44
	MM	511	432	184.15	215.90	6	229		291

- 1: ALL ROUGH DIMENSIONS MAY VARY BY .25" DUE TO CASTING AND/OR FABRICATION VARIATIONS.
- 2: LARGEST MOTOR WIDTH.
- 3: CONDUIT BOX MAY BE LOCATED ON EITHER SIDE. CONDUIT OPENINGS MAY BE LOCATED IN STEPS OF 90 DEGREES REGARDLESS OF LOCATION. STANDARD AS SHOWN WITH CONDUIT OPENING DOWN.
- 4: TAP SIZE AND BOLT PENETRATION ALLOWANCE.
- 5: ALL TAPPED HOLES ARE UNIFIED NATIONAL COARSE, RIGHT HAND THREAD.
- 6: TOLERANCES SHOWN ARE IN INCHES ONLY.
- 7: FRAME REFERENCE: 8.250/182//9.000/184  
9.500/213//11.000/215

TOLERANCES	
FACE RUNOUT	.004 T.I.R.
PERMISSIBLE ECCENTRICITY OF MOUNTING RABBET	.004 T.I.R.
PERMISSIBLE SHAFT RUNOUT	.002 T.I.R.

07-2030/C

**Nidec Motor Corporation**  
St. Louis, Missouri

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ISSUED BY  
**V. PAWAR**  
APPROVED BY  
**R. KING**

IHP\_DP\_NMCA (MAR-2011) SOLIDEDGE

# NAMEPLATE DATA

CATALOG NUMBER: _____		NAMEPLATE PART #: <span style="border: 1px solid black; padding: 2px;">417128-001</span>	
MODEL	<span style="border: 1px solid black; padding: 2px;">DR43</span>	FR	<span style="border: 1px solid black; padding: 2px;">213TC</span>
SHAFT END BRG		<span style="border: 1px solid black; padding: 2px;">6208-2Z-J/C3 - QTY 1</span>	
PH	<span style="border: 1px solid black; padding: 2px;">3</span>	MAX AMB	<span style="border: 1px solid black; padding: 2px;">40 C</span>
INSUL CLASS	<span style="border: 1px solid black; padding: 2px;">F</span>	Asm. Pos	_____
DUTY		<span style="border: 1px solid black; padding: 2px;">CONT</span>	
HP	<span style="border: 1px solid black; padding: 2px;">7.5</span>	RPM	<span style="border: 1px solid black; padding: 2px;">1765</span>
VOLTS	<span style="border: 1px solid black; padding: 2px;">460</span>	<span style="border: 1px solid black; padding: 2px;">230</span>	_____
FL AMPS	<span style="border: 1px solid black; padding: 2px;">9.1</span>	<span style="border: 1px solid black; padding: 2px;">18.2</span>	_____
SF AMPS	<span style="border: 1px solid black; padding: 2px;">11.3</span>	<span style="border: 1px solid black; padding: 2px;">22.5</span>	_____
SF	<span style="border: 1px solid black; padding: 2px;">1.25</span>	DESIGN	<span style="border: 1px solid black; padding: 2px;">B</span>
NEMA NOM EFFICIENCY	<span style="border: 1px solid black; padding: 2px;">91.7</span>	NOM PF	<span style="border: 1px solid black; padding: 2px;">84.3</span>
GUARANTEED EFFICIENCY	<span style="border: 1px solid black; padding: 2px;">90.2</span>	MAX KVAR	<span style="border: 1px solid black; padding: 2px;">2.3</span>
CODE	<span style="border: 1px solid black; padding: 2px;">H</span>	KiloWatt	<span style="border: 1px solid black; padding: 2px;">5.595</span>
		HZ	<span style="border: 1px solid black; padding: 2px;">60</span>

**UL DATA (IF APPLICABLE):**

DIVISION	_____	CLASS I	_____	GROUP I	_____
TEMP CODE	_____	CLASS II	_____	GROUP II	_____

**VFD DATA (IF APPLICABLE):**

VOLTS	_____	TORQUE 1	_____	TORQUE 2	_____
AMPS	_____	VFD LOAD TYPE 1	_____	VFD LOAD TYPE 2	_____
		VFD HERTZ RANGE 1	_____	VFD HERTZ RANGE 2	_____
		VFD SPEED RANGE 1	_____	VFD SPEED RANGE 2	_____
SERVICE FACTOR	_____	FL SLIP	_____		
NO. POLES	<span style="border: 1px solid black; padding: 2px;">4</span>	MAGNETIZING AMPS	<span style="border: 1px solid black; padding: 2px;">3.4</span>		
VECTOR MAX RPM	_____	Encoder PPR	_____		
Radians / Seconds	<span style="border: 1px solid black; padding: 2px;">1</span>	Encoder Volts	_____		

**TEAO DATA (IF APPLICABLE):**

HP (AIR OVER)	_____	HP (AIR OVER M/S)	_____	RPM (AIR OVER)	_____	RPM (AIR OVER M/S)	_____
FPM AIR VELOCITY	_____	FPM AIR VELOCITY M/S	_____	FPM AIR VELOCITY SEC	_____		

**ADDITIONAL NAMEPLATE DATA:**

Decal / Plate	WD=417133	Customer PN	
Notes		Non Rev Ratchet	
Max Temp Rise	80C RISE/RES@1.00SF	OPP/Upper Oil Cap	GREASE
Thermal (WDG)		SHAFT/Lower Oil Cap	GREASE
Altitude			
Regulatory Notes		Regulatory Compliance	
COS		Marine Duty	
Balance		Arctic Duty	
3/4 Load Eff.	92.4	Inrush Limit	
Motor Weight (LBS)	105	Direction of Rotation	
Sound Level		Special Note 1	
Vertical Thrust (LBS)		Special Note 2	
Thrust Percentage		Special Note 3	
Bearing Life		Special Note 4	
Starting Method		Special Note 5	
Number of Starts		Special Note 6	
200/208V 60Hz Max Amps		SH Max. Temp.	
190V 50 hz Max Amps		SH Voltage	
380V 50 Hz Max Amps		SH Watts	
NEMA Inertia		Load Inertia	
Sumpheater Voltage		Sumpheater Wattage	
Special Accessory Note 1		Special Accessory Note 16	
Special Accessory Note 2		Special Accessory Note 17	
Special Accessory Note 3		Special Accessory Note 18	
Special Accessory Note 4		Special Accessory Note 19	
Special Accessory Note 5		Special Accessory Note 20	
Special Accessory Note 6		Special Accessory Note 21	
Special Accessory Note 7		Special Accessory Note 22	
Special Accessory Note 8		Special Accessory Note 23	
Special Accessory Note 9		Special Accessory Note 24	
Special Accessory Note 10		Special Accessory Note 25	
Special Accessory Note 11		Special Accessory Note 26	
Special Accessory Note 12		Special Accessory Note 27	
Special Accessory Note 13		Special Accessory Note 28	
Special Accessory Note 14		Special Accessory Note 29	
Special Accessory Note 15		Special Accessory Note 30	

**NIDEC MOTOR CORPORATION  
ST. LOUIS, MO**



TYPICAL NAMEPLATE DATA  
ACTUAL MOTOR NAMEPLATE LAYOUT MAY VARY  
SOME FIELDS MAY BE OMITTED

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## MOTOR PERFORMANCE

MODEL NO.	CATALOG NO.	PHASE	TYPE	FRAME
DR43	NA	3	UTEF	213TC

ORDER NO.	21942	LINE NO.

MPI:	67082	67083
HP:	7.5	7.5
POLES:	4	4
VOLTS:	460	230
HZ:	60	60
SERVICE FACTOR:	1.25	1.25
EFFICIENCY (%):		
S.F.	90.7	90.7
FULL	91.7	91.7
3/4	92.4	92.4
1/2	91.7	91.7
1/4	87.4	87.4
POWER FACTOR (%):		
S.F.	86	86
FULL	84.3	84.3
3/4	80.6	80.6
1/2	72.1	72.1
1/4	50.9	50.9
NO LOAD	6.3	6.3
LOCKED ROTOR	44.6	44.6
AMPS:		
S.F.	11.3	22.5
FULL	9.1	18.2
3/4	7.1	14.1
1/2	5.3	10.6
1/4	3.9	7.9
NO LOAD	3.4	6.8
LOCKED ROTOR	64	127
NEMA CODE LETTER	H	H
NEMA DESIGN LETTER	B	B
FULL LOAD RPM	1765	1765
NEMA NOMINAL EFFICIENCY (%)	91.7	91.7
GUARANTEED EFFICIENCY (%)	90.2	90.2
MAX KVAR	2.3	2.3
AMBIENT (°C)	40	40
ALTITUDE (FASL)	3300	3300
SAFE STALL TIME-HOT (SEC)	25	25
SOUND PRESSURE (DBA @ 1M)	60	60
TORQUES:		
BREAKDOWN{% F.L.}	315	315
LOCKED ROTOR{% F.L.}	242	242
FULL LOAD{LB-FT}	22.3	22.3

The Above Data Is Typical, Sinewave Power Unless Noted Otherwise

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ST. LOUIS, MO

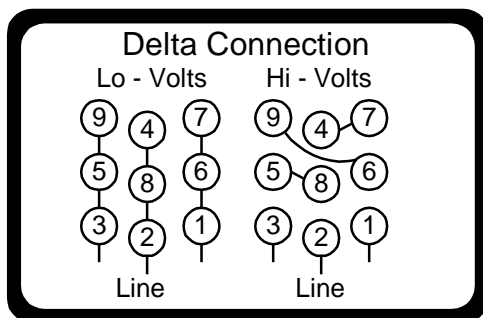


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A109145

### Motor Wiring Diagram 9 Lead, Dual Voltage (DELTA Conn.)



To reverse direction of rotation interchange connections L1 and L2.

Each lead may have one or more cables comprising that lead.  
In such case each cable will be marked with the appropriate lead number.

## RENEWAL PARTS

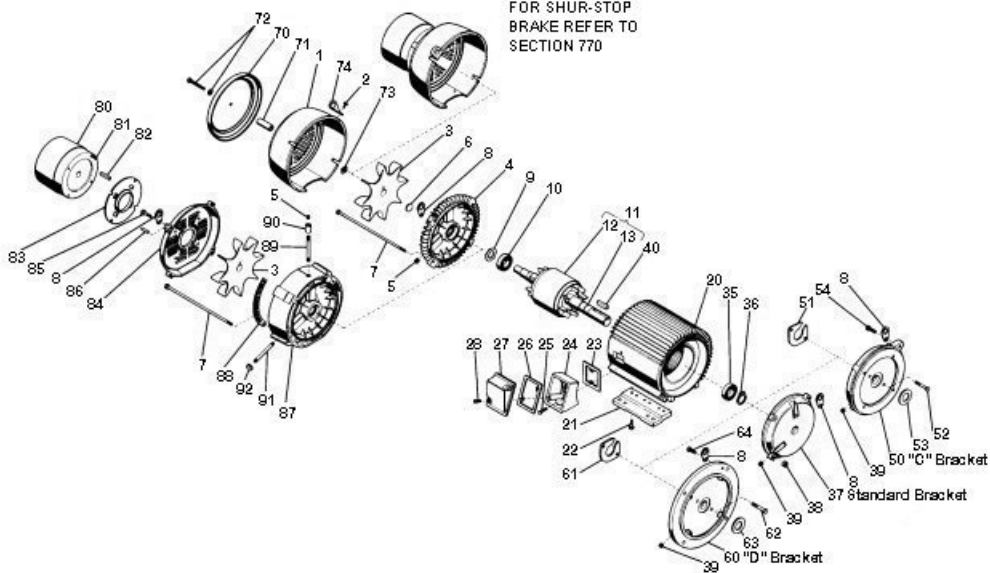
FRAMES - 182 THRU B256

UNIMOUNT TOTALLY ENCLOSED MOTORS

TYPES: FUT, FUT4, FUTF, FUTF4, FUTFN, FUTN, UT, UT1, UT2, UT3, UT4, UTE, UTE1, UTE3, UTE4, UTEF, UTEF1, UTEF4, UTEN, UTF, UTF1, UTF4, UTFI, UTFN, UTI, UTI1, UTI4, UTN, UTN1, UTQ, UTV

THIS PARTS LIST IS GOOD FOR THE FOLLOWING TYPES:

Types	Frames	Types	Frames
UT	182T, TC, TCH, TD, TCZ 184T, TC, TCH, TD, TCZ 213T, TC, TD, TCZ 215T, TC, TD, TCZ 254T, TC, TD, TCZ 256T, TC, TD, TCZ B215TC, TCZ B256TC, TCZ	UTF	182TC, TCH, TD 184TC, TCH, TD 213TC, TD 215TC, TD 254TC, TD 256TC, TD
UT-1	182, 184, B184, 213, 215, B215, 254, 256, B256JP	UTV	182TCV, TCHV, JMV, JPV, JPYV 184TCV, TCHV, JMV, JPV, JPYV 213TCV, JMV, JPV 215TCV, JMV, JPV B215TCV, JMV, JPV 254TCV, JMV, JPV 256TCV, JMV, JPV
UT-2	182, 184, B184JPY		
UT-3	213, 215, B215JPZ		
UT-4	182, 184, B184, 213, 215, B215, 254, 256, B256JM		
UTE, UTN, UTQ	182, 184, 213, 215, 254, 256T		



**WARNING:**

Any disassembly or repair work on explosionproof motors will void the Underwriters Laboratories, Inc. label unless done by the manufacturer, or a facility approved by the Underwriters Laboratories, Inc. Refer to your nearest sales office for assistance.

**BEARINGS:**

Refer to motor nameplate for the bearing numbers.

**PRICES:**

Parts stocking distributors: refer to renewal parts numerical index. All Others: refer to your nearest parts distributor.



## RENEWAL PARTS

### FRAMES - 182 THRU B256 UNIMOUNT TOTALLY ENCLOSED MOTORS

TYPES: FUT, FUT4, FUTF, FUTF4, FUTFN, FUTN, UT, UT1, UT2, UT3, UT4, UTE, UTE1, UTE3, UTE4, UTEF, UTEF1, UTEF4, UTEN, UTF, UTF1, UTF4, UTFI, UTFN, UTI, UTI1, UTI4, UTN, UTNI, UTQ, UTV

ITEM NO.	QTY	NAME OF PART
1	1	Fan Cover (not used on type UTN)
2	4	Self Tapping Screw (not used on type UTN)
3	1	Fan Assembly (not used on type UTN)
4	1	Bracket Assembly
5	2	Hex Countersunk Pipe Plug
6	1	Bracket Plug (type UTN only)
7	4	Hex Head Cap Screw
8	2	Lifting Lug (not used on type UTV)
9	1	Spring Wave Washer (not used on types UT-1, UT-2, UT-3, UT-4 and UTV)
10	1	Ball Bearing
11	1	Rotor Assembly (includes items 12 and 13)
12	1	Rotor Core
13	1	Shaft
14-19	-	Not Used
20	1	Wound Stator Assembly (includes items 21 and 22 if used)
21	2	Mounting Foot (not used on types UTF and UTV)
22	6	Hex Head Cap Screw (not used on types UTF and UTV)
23	1	Gasket
24	1	Outlet Box Base
25	2	Hex Head Cap Screw
26	1	Gasket
27	1	Outlet Box Cover
28	2	Self Tapping Screw
29-34	-	Not Used
35	1	Ball Bearing
36	1	Retaining Snap Ring (qty. 2 on frames 182 & 184T, TC, TCH, TCV, TCHV, types UT, UTE, UTF, UTQ & UTV) (not used on frames 213T thru 256T, type UTN)
37	1	Bracket Assembly (type UT, UTE, UTN and UTQ only)
38	4	Hex Nut
39	2	Hex Countersunk Pipe Plug
40	1	Square Key
41-49	-	Not Used
For types UT, UTF and UTV with "C" bracket, and types UT-1, UT-3 and UT-4 omit items 9 & 37 and items 38 on frames 182 & 182TC, JPV, types UT, UT-2 and UTF, and add the following parts		
50	1	"C" Bracket Assembly
51	1	Clamping Plate

ITEM NO.	QTY	NAME OF PART
52	2	Hex Head Cap Screw
53	1	Water Deflector
54	1	Hex head Cap Screw (used on frames 182 & 184JC, JPV, types UT, UT-2 and UTF)
55-59	-	Not Used
For types UT and UTF with "D" bracket, omit items 9 & 37, and item 38 on frames 182 & 182 & 184TD, and add the following parts		
60	1	"D" Bracket Assembly
61	1	Clamping Plate
62	2	Hex Head Cap Screw
63	1	Water Deflector
64	1	Hex Head Cap Screw (used on 182 & 184 TD)
65-69	-	Not Used
For type UTV and units with canopy cap, omit item 8 and add the following		
70	1	Canopy Cap
71	3	Spacer (qty. 1 on frames 182 and 184)
72	3	Hex Head Cap Screw and Lockwasher (qty. 1 on frames 182 and 184)
73	3	Square Nut (qty. 1 on frames 182 and 184)
74	2	Lifting Lug
75-79	-	Not Used
For SHUR-STOP brakes, omit items 1 & 3, and qty. one of item 8. Refer to section 770 for part addition		
For Dings and Stearns beake, omit items 1, 2 and 4, and qty. one of items 5, and add the following		
80	1	Brake (for replacement parts for brake, refer to brake manufacturer)
81	4	Socket Head Cap Screw (qty. 2 on brakes under 10 lb.ft.)
82	1	Key
83	1	Baffle Plate
84	4	Brake Mounting Bracket
85	4	Hex Head Cap Screw
86	2	Groove Pin
87	1	Brake Adaptor Bracket
88	2	Screen
89	1	Nipple Fitting
90	1	Pipe Coupling
91	1	Nipple Fitting
92	1	Pipe Cap

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reference: Renewal Parts Section 700, Pages 14 & 15