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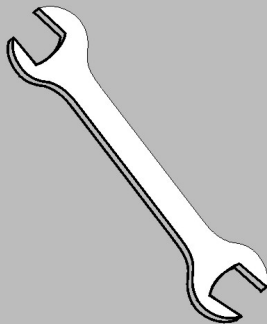
## Kit Instruction—

**39D148AAAR**

**39H169AAxR**

**39D169BAxR**

**39D180ADxR**



# Please Read

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## References to Yellow Troubleshooting Pages

This manual may contain references to "yellow pages." Although the pages containing troubleshooting procedures are no longer printed on yellow paper, troubleshooting instructions, if any, will be contained in the easily located "Troubleshooting" chapter or section. See the table of contents.

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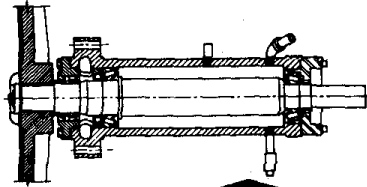
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# Maintenance Bulletin

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MAINTENANCE BULLETIN B22MB84006  
October 21, 1983

RE: PROPER BELT TENSIONING

Gentlemen:

Proper belt tensioning is important not only to the service life of the belts themselves but also motor and bearing life. Of course, the service life of V belts depends on other normal maintenance functions.

Upon installation, the pulleys should be checked for alignment and that the pulleys are not cocked, chipped or damaged in any way. Also, be sure there is no foreign matter build up inside the grooves.

New V belts will stretch their most during their first 6 to 8 weeks of operation. Therefore, after proper installation, tension should be checked after the first 6 to 8 weeks of operation and at least once a year thereafter. And most certainly if a squeal is detected.

Finally, V belts must be kept relatively clean. This means a periodic check and cleaning by blower, vacuum, etc. of the belts dust, lint, etc. which settle from the air. Liquids of any type (water or oil) should be kept away from belts.

In this regard we are pleased to provide the attached instructions for checking and adjusting V belt tension on MILNOR washer-extractors. These instructions are provided in four different sections, each containing tension tables for various size machines. Only one copy of each is attached but we will provide more upon request at no charge. It is suggested that you order one complete set for each mechanic.

The belt tension tester, mentioned in the instructions, is available from MILNOR under our part number 30T001. Please check with our Parts Department for price.

We are happy to offer these instructions and if there are any questions, please contact anyone in our Service Engineering Department.

Very truly yours,

PELLERIN MILNOR CORPORATION

  
Leroy J. Leveigne  
Supervisor, Service Engineering

LJT/kf

Attachment

## V-BELT TENSION ADJUSTMENTS FOR 30" AND 36" B-TYPE MACHINES AND 42" Q-TYPE MACHINES

This instruction is to be used for adjusting the belt tension on the following machine codes:

30016BWE	42026QHE
36021BWE	42026QTG
360326QWE	42026QTH
42026QWE	

A belt tension testing device (Milnor® part number 30T001) and a straight edge are required when using these instructions.

### Tension Settings

Set the o-rings on the tension testing device (see FIGURE 1) as follows:

1. Move the upper o-ring to the topmost position, resting against the bottom edge of the cap.
2. Find the proper belt deflection setting (by machine model and belt function) in the appropriate table below.
3. Move the lower o-ring on the tension tester to this deflection setting on the inches scale.

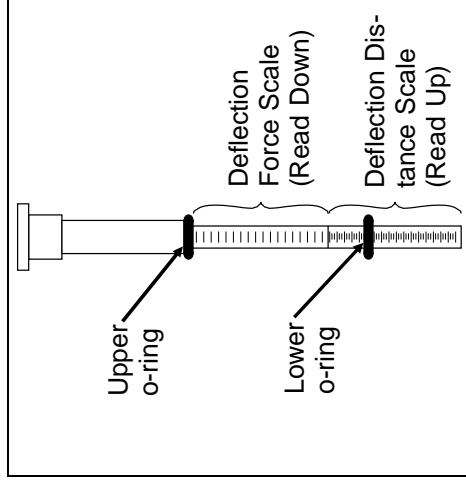
**NOTE 1:** The tension testing device is marked on the one side in inches and pounds and on the other side in centimeters and kilograms. All values in the tables are marked.

**NOTE 2:** The instruction sheet provided with the tension testing device should not be used. Use only the instructions provided herein.

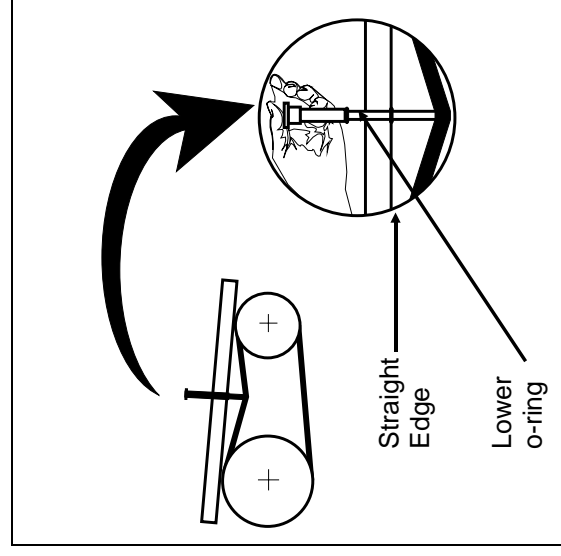
**NOTE 3:** The reference (ref.) codes shown in the tables are for factory use only.

### Belt Tension Measurements

1. Place a straight edge along the top edge of the belt to be tested so that it spans both pulleys. Place the tension tester in the center of the belt and press and down on the cap until the lower o-ring is in line with the straight edge, as shown.
2. Read the setting of the upper o-ring on the LBS scale of the tension tester.
3. Compare this value with the acceptable range in the appropriate table. If the belt is brand new (has never been run), use the range in the Initial Tension column. If the belt is not brand new, locate the acceptable range in the Final Tension column.



**FIGURE 1** (MSSM0204AE)  
Tension Tester Scales



**FIGURE 2** (MSSM0204AE)  
Taking Measurements with the Tension Tester

4. If the reading on the tension tester is less than the range shown in the table, the belt is too loose and must be tightened. If the reading is greater than the range shown in the table, the belt is too tight and must be loosened. Adjust the belt until the reading falls within the acceptable range in the table.

#### 30016BWE

#### 36021BWE

	Belt Deflect. (inches)	Initial Tension (lbs.)		Belt Deflect (IN)	Initial Tension (lbs.)		Initial Tension (ref.)
		(lbs.)	(ref.)		(lbs.)	(ref.)	
WASH/2 SPEED WASH	5/16	6.6 – 9.2	KP3	13/32	5.1 – 7.1	KN	2 – 2.4 DN
	11/32	2.4 – 2.84	DP2	13/32	2.0 – 2.4	DN	2 – 2.4 DN
DRAIN	5/16	9.6 – 13.0	MP3	25/64	7.4 – 10.0	MN	7.4 – 10.0 MN
	11/32	2.8 – 4.0	EP2	13/32	2.4 – 3.37	EN	2.4 – 3.4 EN
HIGH SPEED EXTRACT	25/64	10.5 – 14.3	NP3	27/64	8.1 – 11.0	NN	8.1 – 11.0 NN
	25/64	8.0 – 11.0	LP3	27/64	6.2 – 8.5	LN	7.4 – 10.0 MN
LOW SPEED EXTRACT	11/64	9.0 – 13.0	MP3	11/64	7.4 – 10.0	MN	6.6 – 9.2 KP3
	5/32			11/64			5.1 – 7.1 KN

#### 36026QWE

#### 42026QWE

	Belt Deflect. (inches)	Initial Tension (lbs.)		Belt Deflect (IN)	Initial Tension (lbs.)		Initial Tension (ref.)
		(lbs.)	(ref.)		(lbs.)	(ref.)	
WASH/2 SPEED WASH	13/32	2.4 – 2.84	DP2	11/32	2.0 – 2.4	DN	7.4 – 10.0 MN
	13/32			23/64			MP3
DRAIN	25/64	9.6 – 13.0	MP3	23/64	7.4 – 10.0	MN	2.8 – 4.0 EP2
	13/32	2.8 – 4.0	EP2	23/64	2.4 – 3.34	EN	10.5 – 14.3
HIGH SPEED EXTRACT	7/16	9.6 – 13.0	MP3	7/16	7.4 – 10.0	MN	9.6 – 13.0 NP3
	7/16	8.0 – 11.0	LP3	7/16	6.2 – 8.5	LN	9.6 – 13.0 MP3
LOW SPEED EXTRACT	3/16	9.6 – 13.0	MP3	1/4	7.4 – 10.0	MN	7.4 – 10.0 MN
	3/16			1/4			6.6 – 9.2 KP3

#### 42026QHE, QTG, QTH

	Belt Defl. (inches)	Initial Tension (lbs.)		Belt Deflect (lbs.)	Final Tension (ref.)	
		(lbs.)	(ref.)		(lbs.)	(ref.)
WASH/2 SPEED WASH	19/64	9.62 – 13.0	MP3	7.4 – 10.0		MN
	5/32	10.5 – 14.3		8.1 – 11.0		NN
MAIN	31/64	10.5 – 14.3	NP3	8.1 – 11.0		NN
	15/32					
OPTIONAL LOW SPEED EXTRACT	19/64	8.0 – 11.0	LP3	6.2 – 8.5		LN

## V-BELT TENSION ADJUSTMENTS

This instruction is to be used for adjusting the belt tension on the following machine models:

42031WE2	42031SG2	42031WE3	42031SG3
42044WE2	42044SG2	42044WE3	42044SG3

A belt tension testing device (Milnor<sup>®</sup> part number 30T001) and a straight edge are required when using these instructions.

### Tension Settings

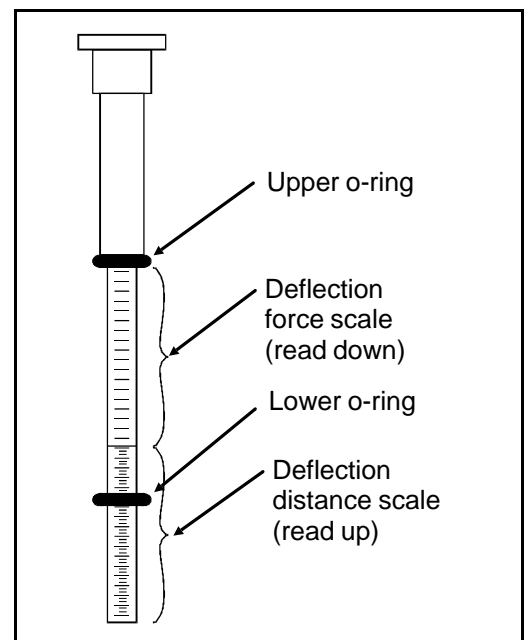
Set the o-rings on the tension testing device (FIGURE 1) as follows:

1. Move the upper o-ring to the topmost position, resting against the bottom edge of the cap.
2. Find the proper Belt Deflection setting (by machine model and belt function) in the appropriate table in this section.
3. Move the lower o-ring on the tension tester to this deflection setting on the inches scale.

**NOTE 1:** The tension testing device is marked on one side in inches and pounds and on the other side in centimeters and kilograms. All values in the tables are in inches (in) and pounds (lbs).

**NOTE 2:** The instruction sheet provided with the tension testing device should not be used. Use only the instructions provided herein.

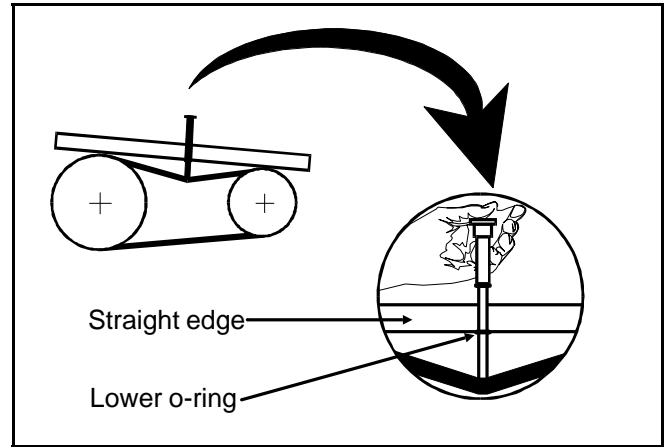
**NOTE 3:** The reference (ref) codes shown in the tables are for factory use only.



**FIGURE 1** (MSSM0301AE)  
**Tension Tester Scales**

## Belt Tension Measurements

- Place a straight edge along the top edge of the belt to be tested so that it spans both pulleys. Place the tension tester in the center of the belt and press down on the cap until the lower o-ring is in line with the straight edge, as shown.
- Read the setting of the upper o-ring on the lbs scale of the tension tester.
- Compare this value with the acceptable range in the appropriate table. If the belt is brand new (has never been run), use the range in the Initial Tension column. If the belt is not brand new, locate the acceptable range in the Final Tension column.
- If the reading on the tension tester is *less* than the range shown in the table, the belt is *too loose* and must be tightened. If the reading is *greater* than the range shown in the table, the belt is *too tight* and must be loosened. Adjust the belt until the reading falls within the acceptable range in the table.



**FIGURE 2** (MSSM0301AE)  
**Taking Measurements with the Tension Tester**

### 42031WE2/WE3 and 42044WE2/WE3 Belt Tension Measurements

	Belt Deflection (inches)	Initial Tension		Final Tension	
		(LBS)	(REF)	(LBS)	(REF)
Wash/2-Speed Wash	11/64	9.6-13.0	MP3	7.4-10.0	MN
Drain	3/8	8.0-11.0	LP3	6.2-8.5	LN
Main	50Hz	10.5-14.3	NP3	8.1-11.0	NN
	60Hz				

### 42031SG2/SG3 and 42044SG2/SG3 Belt Tension Measurements

	Belt Deflection (inches)	Initial Tension		Final Tension	
		(LBS)	(REF)	(LBS)	(REF)
Wash/2-Speed Wash	11/64	9.6-13.0	MP3	7.4-10.0	MN
Drain	3/8	8.0-11.0	LP3	6.2-8.5	LN
E1 (optional)	11/32	9.6-13.0	MP3	7.4-10.0	MN
Upper Jackshaft to Lower Jackshaft	50Hz	10.5-14.3	NP3	8.1-11.0	NN
	60Hz				

## V-BELT TENSION ADJUSTMENTS FOR 48", 52", 60" AND 72" WASHER-EXTRACTORS

This instruction is to be used for adjusting the belt tension on the following machine models:

48032BHE	48032BTG	48032BTH	48036QHE	48036QTG	48036QTH		
52038WE1	52038WTF	52038WTB	52038WTG	52038WTH			
60036WE2	60036WE3	60036SG2	60036SG3	60044WE2	60044WE3	60044SG2	60044SG3
72044SG2	72044SG3	72044WE2	72044WE3	72044WTB	72044WTG	72044WTH	

A belt tension testing device (Milnor<sup>®</sup> part number 30T001) and a straight edge are required when tensioning unbanded belts.

### Tension Settings—Unbanded Belts

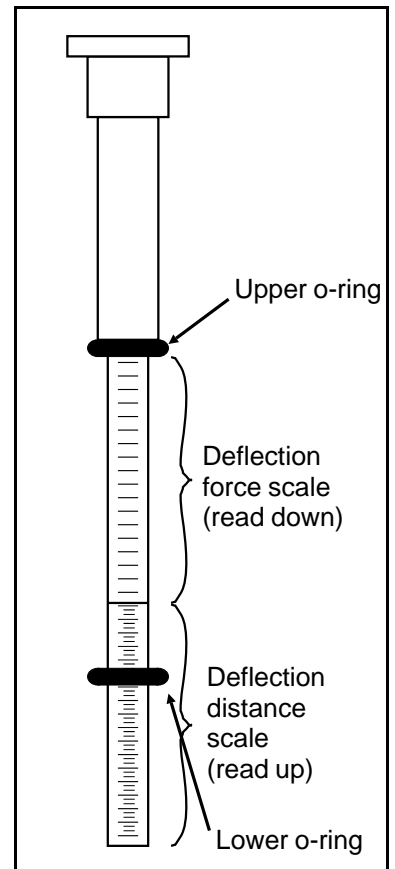
Set the o-rings on the tension testing device (see FIGURE 1) as follows:

1. Move the upper o-ring to the topmost position, resting against the bottom edge of the cap.
2. Find the proper belt deflection setting (by machine model and belt function) in the appropriate table below.
3. Move the lower o-ring on the tension tester to this deflection setting on the inches scale.

**NOTE 1:** The tension testing device is marked on one side in inches and pounds and on the other side in centimeters and kilograms. All values in the tables are in inches (in.) and pounds (lbs.).

**NOTE 2:** The instruction sheet provided with the tension testing device should not be used. Use only the instructions provided herein.

**NOTE 3:** The reference (ref.) code shown in the tables are for factory use only.

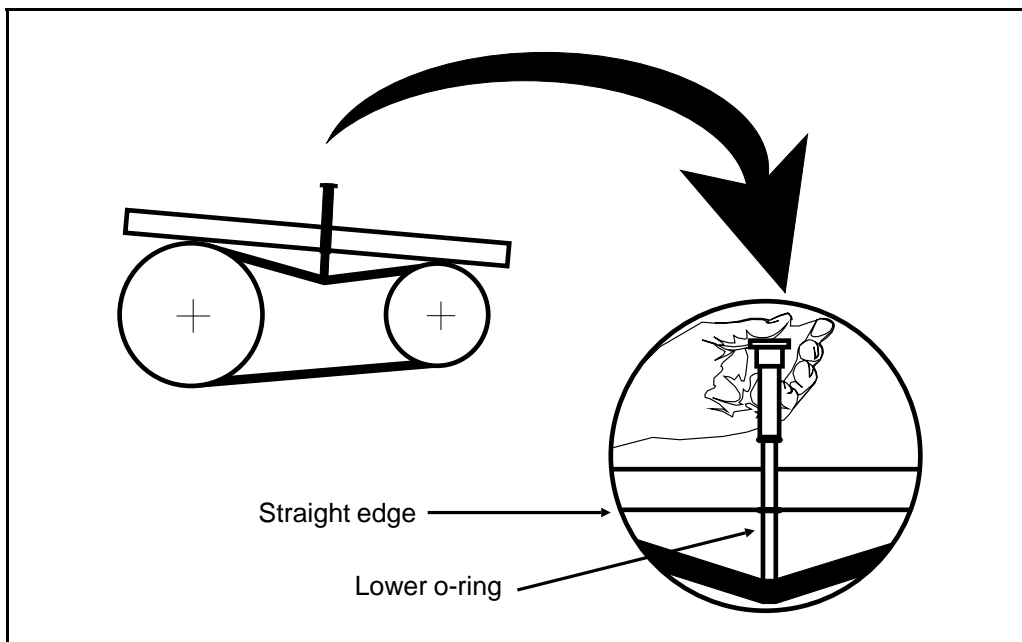


**FIGURE 1** (MSSMA405AE)  
**Tension Settings**

# Belt Tension Measurements

## Unbanded Belts

1. Place a straight edge along the top edge of the belt to be tested so that it spans both pulleys. Place the tension tester in the center of the belt and press down on the cap until the lower o-ring is in line with the straight edge, as shown.
2. Read the setting of the upper o-ring on the lbs scale of the tension tester.
3. Compare this value with the acceptable range in the appropriate table. If the belt is brand new (has never been run), use the range in the Initial Tension column. If the belt is not brand new, locate the acceptable range in the Final Tension column.
4. If the reading on the tension tester is *less* than the range shown in the table, the belt is *too loose* and must be tightened. If the reading is *greater* than the range shown in the table, the belt is *too tight* and must be loosened. Adjust the belt until the reading falls within the acceptable range in the table.



**FIGURE 2** (MSSMA405AE)  
**Measuring Belt Tension**



## Tensioning Banded Belts

### 48032BHE, BTG, BTH

### 48036QHE, QTG, QT

	Belt Deflect. (inches)	Initial Tension		Initial Tension		Belt Deflect (in.)	Initial Tension		Initial Tension	
		(lbs.)	(ref.)	(lbs.)	(ref.)		(lbs.)	(ref.)	(lbs.)	(ref.)
WASH/ 2 SPEED WASH	9/32	6.6 - 9.2	KP3	5.1 - 7.1	KN	5/16	5.7 - 7.6	JP3	4.4 - 5.9	JN
DRAIN	5/32	5.7 - 7.6	JP3	4.4 - 5.9	JN	5/32	6.6 - 9.2	KP3	5.1 - 7.1	KN
MAIN	50C 35/64	10.5 - 14.3	NP3	8.1 - 11.0	NN	17/32	10.5 - 14.3	NP3	8.1 - 11.0	NN
	60C 17/32									
LOW SPEED EXTRACT	13/64	6.6 - 9.2	KP3	5.1 - 7.1	KN	3/16	9.62 - 13.0	MP3	7.4 - 10.0	MN

### 52038WE1, WTF, WTB, WTG, WTH

### 60036 + 60044WE2 + WE3

	Belt Deflect. (inches)	Initial Tension		Initial Tension		Belt Deflect (in.)	Initial Tension		Initial Tension	
		(lbs.)	(ref.)	(lbs.)	(ref.)		(lbs.)	(ref.)	(lbs.)	(ref.)
WASH/ 2 SPEED WASH	25/64	10.5 - 14.3	NP3	8.1 - 11.0	NN	3/16	5.7 - 7.6	JP3	4.4 - 5.9	JN
DRAIN	5/32	10.5 - 14.3	NP3	8.1 - 11.0	NN	13/32	6.6 - 9.2	KP3	5.1 - 7.1	KN
E1	1/4	6.6 - 9.2	KP3	5.1 - 7.1	KN	17/64	6.6 - 9.2	KP3	5.1 - 7.1	KN
E2	1/2	6.6 - 9.2	KP3	5.1 - 7.1	KN	11/32	6.6 - 9.2	KP3	5.1 - 7.1	KN
MAIN	50C 11/16	18.2 - 26.0	SP3	14.0 - 20.0	SN	43/64	16.9 - 20.8	RP3	13.0 - 16.0	RN
	60C 23/32	16.9 - 20.8	RP3	13.0 - 16.0	RN	45/64				

**48032BHE, BTG, BTH**

**48036QHE, QTG, QT**

	Belt Deflect. (inches)	Initial Tension		Initial Tension		Belt Deflect (in.)	Initial Tension		Initial Tension	
		(lbs.)	(ref.)	(lbs.)	(ref.)		(lbs.)	(ref.)	(lbs.)	(ref.)
WASH/ 2 SPEED WASH	1/4	5.7 - 7.6	JP3	4.4 - 5.9	JN	17/64	5.7 - 7.6	JP3	4.4 - 5.9	JN
DRAIN	3/64	6.6 - 9.2	KP3	5.1 - 7.1	KN	33/64	6.6 - 9.2	KP3	5.1 - 7.1	KN
E-1	9/32	6.6 - 9.2	KP3	5.1 - 7.1	KN	17/64	6.6 - 9.2	KP3	5.1 - 7.1	KN
E-2	39/64	6.6 - 9.2	KP3	5.1 - 7.1	KN	5/8	6.6 - 9.2	KP3	5.1 - 7.1	KN
UPPER JACK TO LOWER JACK  LOWER JACK TO UPPER JACK	BANDED BELTS NEED SPECIAL INSTRUCTIONS					BANDED BELTS NEED SPECIAL INSTRUCTIONS				

**52038WE1, WTF, WTB, WTG, WTH**

**60036 + 60044WE2 + WE3**

	Belt Deflect. (inches)	Initial Tension		Initial Tension		Belt Deflect (in.)	Initial Tension		Initial Tension		
		(lbs.)	(ref.)	(lbs.)	(ref.)		(lbs.)	(ref.)	(lbs.)	(ref.)	
WASH/ 2 SPEED WASH	15/64	5.7 - 7.6	JP3	4.4 - 5.9	JN	15/64	5.7 - 7.6	JP3	4.4 - 5.9	JN	
DRAIN	13/32	6.6 - 9.2	KP3	5.1 - 7.1	KN	25/64	6.6 - 9.2	KP3	5.1 - 7.1	KN	
E1	17/64	6.6 - 9.2	KP3	5.1 - 7.1	KN	17/64	6.6 - 9.2	KP3	5.1 - 7.1	KN	
E2	5/16	6.6 - 9.2	KP3	5.1 - 7.1	KN	5/16	6.6 - 9.2	KP3	5.1 - 7.1	KN	
MAIN	50C	45/64	16.9 - 20.8	RP3	13.0 - 16.0	RN	3/4	16.9 - 20.8	RP3	13.0 - 16.0	RN
	60C	11/16	16.9 - 20.8	RP3	13.0 - 16.0	RN	23/32	16.9 - 20.8	RP3	13.0 - 16.0	RN