# STATIONARY AIR MOTORS

Model K6M Nonreversible Base-Mounted Models KK6M and KK6UM Reversible Base-Mounted Model K6M56 Nonreversible Flange-Mounted Models KK6M56 and KK6UM56 Reversible Flange-Mounted

## LUBRICATION

Warning: Lubricate the Motor before using. To avoid leakage during shipment, the oil was drained from the Motor. A quantity of oil sufficient for one filling is contained in the can packed with the Motor. Unscrew the Vent Cap (3) and pour the entire contents of the can into the opening in the top of the Motor Case (1).

#### **Motor Lubrication**

Check oil daily and maintain level with opening in the side of the Motor Case.

When the Motor is subjected to temperatures above  $32^\circ$  F ( $0^\circ$  C): After the Motor has been idle for several hours or overnight, loosen the Drain Plug (2) located at the bottom of the Motor Case (1) and allow the accumulated water to drain out. After draining the water, tighten the Plug in the bottom and remove a similar Plug on the side of the Motor Case. Unscrew the Vent Cap (3) and pour a sufficient quantity of the recommended oil through the opening to bring the oil level up to the side opening. Replace the Plug and Vent Cap.

When the Motor is subjected to temperatures below  $32^{\circ}$  F ( $0^{\circ}$  C): Allow the Motor to remain idle long enough for the water content in the Motor Case (1) to separate from the oil, but not long enough for it to freeze. Drain the water and replenish the oil as above. Should this procedure be impractical, drain the entire contents from the Motor Case immediately after operation ceases, and pour the oil back into the Motor Case before resuming operation. If not drained, a sufficient quantity of water will eventually accumulate so that the Oil Splasher (22) will freeze fast.

For temperatures 30° to 80° F (-1° C to 26° C) use Ingersoll-Rand Medium Oil No. 50 or SAE 30 motor oil.

For temperatures below 30° F (-1° C) use SAE 20 or 20W motor oil.

For temperatures above  $80^{\circ}$  F ( $26^{\circ}$  C) use SAE 40 motor oil.

**Periodically**, as experience dictates, remove the Grease Plug (37) from the Base (36) and, if necessary, inject a sufficient amount of grease to fill the chamber half-full. Use Ingersoll-Rand Heavy Gear Grease No. 70 or a good quality soda base grease of No. 2 consistency.

**Model KK6UM** - Weekly insert a small quantity of Ingersoll-Rand Light Grease No. 28 or a good quality No. 2 cup grease into the Grease Fittings located in the Valve Chest (43). Two or three strokes from a hand grease gun are sufficient for each Fitting.

#### AIR STRAINER

Clean the Air Strainer periodically as experience dictates. Shut off the air supply and unscrew the Air Strainer Plug (403) from the Strainer Cap (404). Tum on the air momentarily and blow out the dirt. If the Screen (401) becomes clogged to the extent that the above method fails to clean it properly, unscrew the Strainer Cap and remove the Screen. Wash the Screen thoroughly in clean kerosene or other solvent.

#### HOSE AND HOSE CONNECTIONS

Use 1-1/2'' (38 mm) hose with a suitable hose fitting (1-1/2'') hose to 1-1/4'' male pipe) for attaching it to the Valve Chest (43). Smaller hose and fittings will reduce the efficiency of the Motor.

(Continued on Page 2.)

Notice: The use of other than genuine Ingersoll-Rand replacement parts may result in decreased tool performance and increased maintenance, and may, at the Company's option, invalidate all warranties.

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## **INSTALLATION**

Install the Motor so that the axis of the Motor Shaft (31) is horizontal, and so that the Vent Cap (3) is not more than  $15^{\circ}$  off top vertical center.

#### **Base-Mounted Motors**

If a Base-Mounted Motor is to be installed in an inverted position, the Motor Case (1) must be rotated  $180^{\circ}$  relative to the Base (36).

- 1. Remove the Drain Plug (2) from the bottom of the Motor Case (1) and drain the oil.
- 2. Remove the twelve Motor Case Cap Screws (39) that secure the Motor Case to the Base.
- 3. Rotate the Motor Case  $180^{\circ}$  and replace the Motor Case Cap Screws.
- **NOTE:** The Vent Cap must not be more than  $15^{\circ}$  off top vertical center.
- 4. Unscrew the Vent Cap (3) and pour the oil back into the Motor Case.

If the Motor is to be mounted to a wall or column with the foot pad of the Base in a vertical position, a special Base must be used.

## **Flange-Mounted Motors**

Flange-Mounted Motors can be installed by either of two methods.

Method No. 1: Provide a mounting with a counterbore which is a close-fit with the small diameter (3.000'' diameter) pilot on the Motor Case Cover (82), and with four mounting bolt holes that align with the four 3/4''-10 thread tapped holes in the Cover. Use mounting screws that will enter no more than 1'' into the tapped holes in the Cover.

Method No. 2: Provide a mounting with a counterbore which is a close fit with the large diameter (16.250" diameter) pilot on the Motor Case Cover, and with a series of tapped holes that align with the bolt holes through the flange on the Motor Case and Motor Case Cover. Use the Motor Case Bolts (84) for attaching the Motor to the mounting.

Always provide a bearing for the outer end of the motor shaft, pinion or shaft extension. Locate it as far from the Motor as possible and be certain that it is properly aligned.

Do not make shaft extensions a tight fit in the broached hole in the Crank. An outboard bearing cannot be perfectly aligned with the crank bearings, and the splined fit must serve, to a limited extent, as a flexible coupling. Recommended dimensions for motor shaft splines will be furnished on receipt of mounting details and outboard bearing location. The motor shaft must be supported in such a manner that no end thrust will be transferred to the Crank.

**Caution**: If the Motor Case Cover (82) is ever removed from the Motor Case (1), it must be replaced with the small, .368" diameter hole on the flange of the Cover aligned with the Vent Cap (3).

#### **BUSHING REPLACEMENT**

Replace a Reverse Valve Bushing (46) or a Rotary Valve Bushing (44) as follows (unless otherwise noted each instruction step is for all Models):

- 1. Remove the Valve Chest Cover Cap Screws (62), Valve Chest Cap Screws (64), and Throttle Valve Cap (59).
- 2. Model KK6UM Withdraw the Throttle Valve (54) and Throttle Valve Ball (53). The Throttle Valve Ball may be lifted out with a quantity of sticky grease on the end of a rod.
- 3. Withdraw the Reverse Valve (52) and Rotary Valve (48). A bolt can be threaded into the tapped hole in the valve face to serve as a handle. The Reverse Valve is tapped 1/2"-13 thread. The Rotary Valve is tapped 5/8"-11 thread.
- 4. Thread a No. HU-932 Valve Chest Jack Bolt, or any 5/8"-11 thread bolt having at least 4" of thread, into the tapped hole in the lug on each side of the Valve Chest (43) until the end of the Bolt contacts the Motor Case (1). Tighten each Bolt a fraction of a turn at a time until the Valve Chest is removed from the Motor Case.
- 5. Support the face of the Valve Chest that contacts the Motor Case and, using an arbor that will clear the Bushing Keys (45), press out the old Bushings.
- 6. Turn the Valve Chest over so that the face that contacts the Motor Case is up.
- 7. Model KK6UM Align the groove in the new Reverse Valve Bushing with the Bushing Key that protrudes into the small bore of the Valve Chest, and press in the new Bushing until its leading face is flush with the supported face of the Valve Chest.
- 8. Align the groove in the new Rotary Valve Bushing with the Bushing Key that protrudes into the large borc of the Valve Chest, and press in the new Bushing until its leading face is flush with the supported face of the Valve Chest.
- 9. Model KK6UM Insert the No. 49265 Throttle Valve Stem Reamer or a .627" diameter reamer into the throttle valve chamber and ream the hole through the bushing wall in which the Throttle Valve Ball (53) operates.

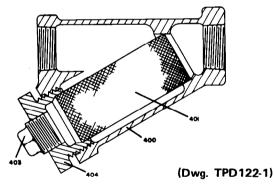
- 10. Model KK6UM Check the fit of the Reverse Valve (52) in the Reverse Valve Bushing. If tight, ream the Bushing 2.250". Caution: The Reverse Valve is chrome plated; do not lap.
- 11. Check the fit of the Rotary Valve in the Rotary Valve Bushing. If the Valve is tighter than a good running fit, lap it in with a mild, fine-grain lapping compound whose abrasive agent will break up rapidly. Wash the parts in clean kerosene to remove all trace of the compound. If the Valve is too tight to lap, ream the Bushing 2.875".
- 12. Model KK6UM Align the cam groove on the Reverse Valve with the hole through the wall of the Bushing in which the Throttle Valve Ball operates.
- 13. Model KK6UM Apply a few drops of light oil to the Throttle Valve Ball and to the stem of the Throttle Valve. Insert the Ball, Valve and Throttle Valve Spring (58) into the valve chamber and retain them with the Throttle Valve Cap (59).
- 14. Model KK6UM Place the Throttle Lever Spring (70) on the Control Arm (72) so that the coil encircles the protruding hub. Rotate the Spring until its lower leg contacts the Throttle Spring Stop Pin (73) which projects from the Control Arm. Grasp the upper leg of the Spring and pull it over the top of the Stop Pin so that the Spring legs are now on opposite sides of the Stop Pin.
- 15. Model KK6UM Install the Throttle Control Arm so that its square socket slides over the square shank of the Reverse Valve, and the spring legs are on opposite sides of the Stop Pin on the Valve Chest.
- 16. Align the holes through the Valve Chest with those in the Motor Case (1) and start the protruding end of the Rotary Valve Bushing (44) squarely into the Motor Case. Protect the face of the Valve Chest with a hardwood block and press or drive in the Bushing until the Valve Chest contacts the Motor Case.
- 17. Insert the Rotary Valve (48) into the Rotary Valve Bushing. Rotate the Valve slowly until the Valve Key Screws (50) located in the end of the Valve engage matching holes in the Crank (17).
- 18. Apply the Valve Chest Cover (60) and retain it with the Valve Chest Screws (64) and Valve Chest Cover Cap Screws (62). The two sections of the Crank (17) are matched before final machining, and the web of each section is stamped with an

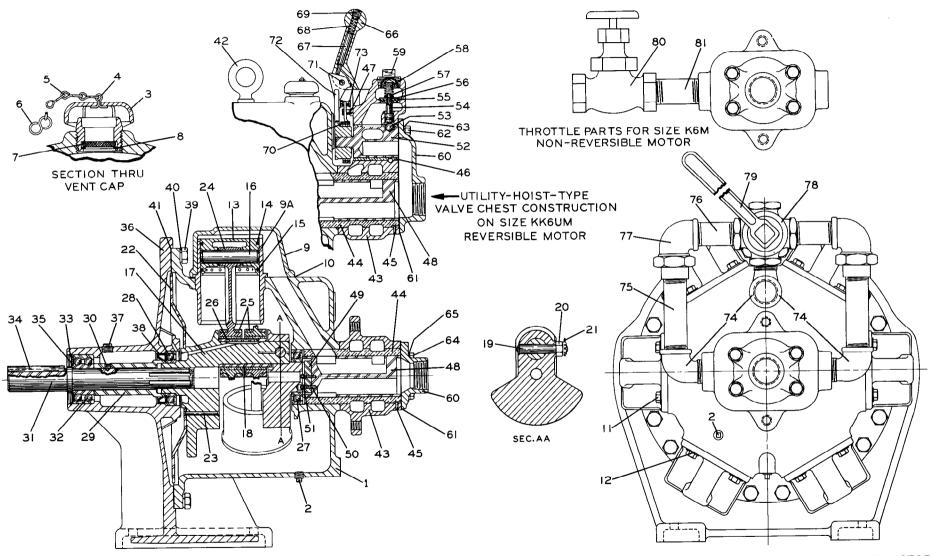
identification mark as AA17, CC21, XX19, etc. Only sections bearing identical marking can be used together. If more than one Crank is disassembled at one time, be sure only matced parts are assembled together.

# AIR STRAINER ASSEMBLY

PA	RT NUMBER FOR ORDERING -	
400	Air Strainer Assembly	K4U-A267AT
401	Air Strainer Screen	K4U-61AT
403	Air Strainer Plug	22SR-165
404	Air Strainer Cap	K4U-268AT
*	Air Strainer Nipple	KKM-286

\* Not illustrated.





END VIEW OF SIZE K6M OR KK6M STATIONARY MOTOR THROTTLE PARTS FOR SIZE KK6M REVERSIBLE MOTOR ILLUSTRATED

## (Dwg. TPA 134-1)

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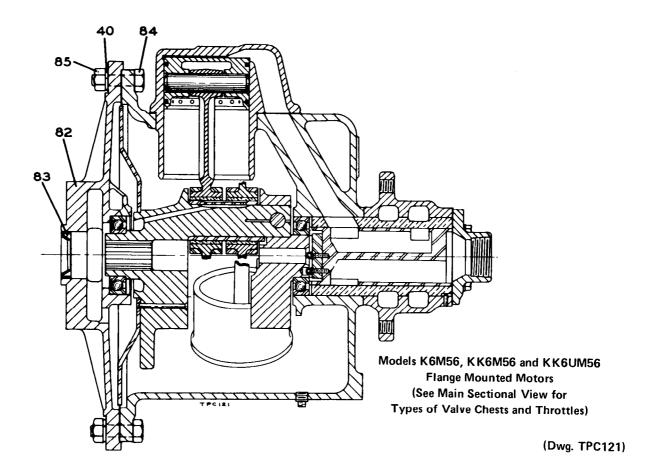
#### PART NUMBER FOR ORDERING

2Drain Plug (3Vent Cap4Vent Cap Cap5Vent Cap Cap6S-Hook7Vent Cap Sap8Vent Cap Sap9Cylinder Assen9Cylinder Assen9Cylinder Cap Sap10Cylinder Cap Sap11Cylinder Cap Sap12Cylinder Cap Sap13Piston Assemb14Piston Ring15Oil Regulati16Piston Wrist Pi17Crank Assemb17Crank Assemb18Crank Pi20Crank Lap21Crank Lap23Oil Splas23Oil Splas24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft Bap33Retaining Ring34Shaft Key35Dust Washer36Base37Grease Plug00Seal38Oil Seal		¥	¥	↓ I
2Drain Plug (3Vent Cap4Vent Cap Cd5Vent Cap Cd6S-Hook7Vent Cap Sd8Vent Cap Sd9Cylinder Assen9Cylinder Gaskd10Cylinder Cap Sd11Cylinder Cap Sd12Cylinder Cap Sd13Piston Assemb14Piston Ring15Oil Regulati16Piston Wrist PiCrank AssemblCrank Assembl17Crank Assembl18Crank Assembl20Crank La20Crank La20Crank La21Crank Di22Oil Splas23Oil S*Oil S24Connecting25Connecting26Crank Valve28Crank Splin29Bearing Spacer30Bearing Spacer31Motor Shaft B.33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal.		К6М К6М56	КК6М КК6М56	KK6UM KK6UM56
<ul> <li>3 Vent Cap</li> <li>4 Vent Cap Constraints</li> <li>5 Vent Cap Constraints</li> <li>7 Vent Cap Sonstraints</li> <li>8 Vent Cap Sonstraints</li> <li>9 Cylinder Assens</li> <li>9 Cylinder Assens</li> <li>9 Cylinder Assens</li> <li>9 Cylinder Cap Sonstraints</li> <li>10 Cylinder Cap Sonstraints</li> <li>11 Cylinder Cap Sonstraints</li> <li>12 Cylinder Cap Sonstraints</li> <li>13 Piston Assemble</li> <li>14 Piston Ring</li> <li>15 Oil Regulati</li> <li>16 Piston Wrist Piton Kinster</li> <li>17 Crank Assemble</li> <li>17 Crank Assemble</li> <li>17 Crank Assemble</li> <li>18 Crank Piton Kinster</li> <li>19 Crank Log</li> <li>20 Crant Log</li> <li>23 Oil Splass</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splin</li> <li>29 Bearing Spacer</li> <li>30 Bearing Spa</li> <li>31 Motor Shaft Bit</li> <li>32 Motor Shaft Bit</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>		K6U-501	K6U-501	K6U-501
<ul> <li>3 Vent Cap</li> <li>4 Vent Cap Cap</li> <li>5 Vent Cap Cd</li> <li>6 S-Hook</li> <li>7 Vent Cap Sd</li> <li>8 Vent Cap Sd</li> <li>Cylinder Assen</li> <li>9 Cylinder Assen</li> <li>9 Cylinder Gaskd</li> <li>10 Cylinder Cap Sd</li> <li>11 Cylinder Cap Sd</li> <li>12 Cylinder Cap Sd</li> <li>13 Piston Assemble</li> <li>14 Piston Ring</li> <li>15 Oil Regulati</li> <li>16 Piston Wrist Pi</li> <li>Crank Assemble</li> <li>17 Crank</li> <li>18 Crank Pi</li> <li>19 Crank La</li> <li>20 Crand</li> <li>21 Crank Di</li> <li>22 Oil Splas</li> <li>23 Oil S</li> <li>* Oil S</li> <li>* Oil S</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Crank Splin</li> <li>29 Bearing Spacer</li> <li>30 Bearing Spa</li> <li>31 Motor Shaft Bi</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	(2)	D02-402	D02-402	D02-402
<ul> <li>4 Vent Cap Ca</li> <li>5 Vent Cap Cd</li> <li>6 S-Hook</li> <li>7 Vent Cap Sd</li> <li>8 Vent Cap Sd</li> <li>Cylinder Assen</li> <li>9 Cylinder Assen</li> <li>9 Cylinder Gaskd</li> <li>11 Cylinder Cap Sd</li> <li>12 Cylinder Cap Sd</li> <li>13 Piston Assemble</li> <li>14 Piston Ring</li> <li>15 Oil Regulati</li> <li>16 Piston Wrist Pi</li> <li>Crank Assemble</li> <li>17 Crank</li> <li>18 Crank Pi</li> <li>19 Crank Ld</li> <li>20 Crand</li> <li>21 Cylinder Cap</li> <li>23 Oil Splas</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splin</li> <li>29 Bearing Spacer</li> <li>30 Bearing Spa</li> <li>31 Motor Shaft Bd</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	· · · · · · · · · · · · · · · · · · ·	D02-303A	D02-303A	D02-303A
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<ul> <li>6 S-Hook</li> <li>7 Vent Cap So</li> <li>8 Vent Cap So</li> <li>9 Cylinder Assen</li> <li>9 Cylinder Assen</li> <li>9 Cylinder Sle</li> <li>10 Cylinder Gaska</li> <li>11 Cylinder Cap So</li> <li>12 Cylinder Cap So</li> <li>12 Cylinder Cap So</li> <li>13 Piston Assemble</li> <li>14 Piston Ring</li> <li>15 Oil Regulati</li> <li>16 Piston Wrist Pi</li> <li>Crank Assemble</li> <li>17 Crank</li> <li>18 Crank Pi</li> <li>19 Crank Lo</li> <li>20 Cranil</li> <li>21 Connecting</li> <li>23 Oil Splass</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splan</li> <li>29 Bearing Spacer</li> <li>30 Bearing Spacer</li> <li>31 Motor Shaft</li> <li>32 Motor Shaft Bi</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	Chain	D02-891	D02-891	D02-891
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<ul> <li>8 Vent Cap So Cylinder Assen</li> <li>9 Cylinder Assen</li> <li>9 Cylinder Sle</li> <li>10 Cylinder Gaska</li> <li>11 Cylinder Cap So</li> <li>12 Cylinder Cap So</li> <li>12 Cylinder Cap So</li> <li>13 Piston Assemble</li> <li>14 Piston Ring</li> <li>15 Oil Regulati</li> <li>16 Piston Wrist Pictor Cank Assemble</li> <li>17 Crank</li> <li>18 Crank Pi</li> <li>19 Crank La</li> <li>20 Crani</li> <li>21 Connecting</li> <li>22 Oil Splas</li> <li>23 Oil S</li> <li>* Oil S</li> <li>* Oil S</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splan</li> <li>29 Bearing Spacer</li> <li>30 Bearing Spacer</li> <li>31 Motor Shaft</li> <li>32 Motor Shaft Bi</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	Screen	D02-889	D02-889	D02-889
Cylinder Assen9Cylinder He9ACylinder Sle10Cylinder Gaska11Cylinder Cap S12Cylinder Cap S13Piston Assemb14Piston Ring15Oil Regulati16Piston Wrist PiCrank Assemb17Crank Assemb18Crank Pi19Crank Lo20Crank21Crank Lo20Crank21Crank C23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spacer31Motor Shaft32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer36Base37Grease Plug38Oil Seal	Screen Retainer	6CND-233-1/2	6CND-233-1/2	6CND-233-1/2
<ul> <li>9 Cylinder He</li> <li>9A Cylinder Sle</li> <li>10 Cylinder Gaska</li> <li>11 Cylinder Cap S</li> <li>12 Cylinder Cap S</li> <li>13 Piston Assembina</li> <li>14 Piston Ring</li> <li>15 Oil Regulati</li> <li>16 Piston Wrist Pictor Crank Assembina</li> <li>17 Crank Assembina</li> <li>18 Crank Pictor</li> <li>18 Crank Pictor</li> <li>19 Crank Lo</li> <li>20 Cranina</li> <li>21 Cranina</li> <li>22 Oil Splas</li> <li>23 Oil S</li> <li>* Oil S</li> <li>* Oil S</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splina</li> <li>29 Bearing Space</li> <li>30 Bearing Space</li> <li>31 Motor Shaft</li> <li>32 Motor Shaft Bic</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	embly (6)	K6U-A505A	K6U-A505A	K6U-A505A
9ACylinder Sle10Cylinder Gaska11Cylinder Cap S12Cylinder Cap S13Piston Assembina14Piston Ring15Oil Regulati16Piston Wrist PicCrank AssembinaCrank Assembina17Crank Assembina18Crank Pic20Crank Lu20Crank Lu20Crank Lu21Crank Lu22Oil Splas23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splan29Bearing Spacer30Bearing Spaina31Motor Shaft33Retaining Ring34Shaft Key35Dust Washer36Base37Grease Plug38Oil Seal	lead	K6U-H505A	K6U-H505A	K6U-H505A
<ul> <li>10 Cylinder Gaske</li> <li>11 Cylinder Cap S</li> <li>12 Cylinder Cap S</li> <li>13 Piston Assembination</li> <li>14 Piston Ring</li> <li>15 Oil Regulatination</li> <li>16 Piston Wrist Pictor</li> <li>17 Crank Assembination</li> <li>18 Crank Pictor</li> <li>18 Crank Pictor</li> <li>19 Crank Log</li> <li>20 Cranination</li> <li>21 Crank Log</li> <li>20 Cranination</li> <li>21 Crank Log</li> <li>23 Oil Splas</li> <li>23 Oil Splas</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splination</li> <li>29 Bearing Space</li> <li>31 Motor Shaft</li> <li>32 Motor Shaft Bick</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	leeve	K6U-L505A	K6U-L505A	K6U-L505A
<ul> <li>11 Cylinder Cap S</li> <li>12 Cylinder Cap S</li> <li>13 Piston Assembination</li> <li>14 Piston Ring</li> <li>15 Oil Regulatination</li> <li>16 Piston Wrist Pictor</li> <li>17 Crank Assembination</li> <li>18 Crank Pictor</li> <li>18 Crank Pictor</li> <li>19 Crank Log</li> <li>20 Cranination</li> <li>21 Crank Log</li> <li>22 Oil Splas</li> <li>23 Oil S</li> <li>* Oil S</li> <li>* Oil S</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splination</li> <li>29 Bearing Spaceming</li> <li>31 Motor Shaft</li> <li>32 Motor Shaft Bination</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	ket (6)	K6U-507	K6U-507	K6U-507
12Cylinder Cap S13Piston Assemb14Piston Ring15Oil Regulati16Piston Wrist Pi17Crank Assembl17Crank Assembl17Crank Assembl17Crank Assembl18Crank Pi19Crank L20Cranl21Cranl22Oil Splas23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spaa31Motor Shaft33Retaining Ring34Shaft Key35Dust Washer36Base37Grease Plug38Oil Seal	Screw (24)	G8-113	G8-113	G8-113
<ul> <li>13 Piston Assemb</li> <li>14 Piston Ring</li> <li>15 Oil Regulati</li> <li>16 Piston Wrist Pi</li> <li>Crank Assembl</li> <li>17 Crank</li> <li>18 Crank Pi</li> <li>19 Crank L</li> <li>20 Cranl</li> <li>21 Cranl</li> <li>22 Oil Splas</li> <li>23 Oil S</li> <li>* Oil S</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splin</li> <li>29 Bearing Spa</li> <li>31 Motor Shaft B.</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	Screw Washer (24)	K6U-504	K6U-504	K6U-504
14Piston Ring15Oil Regulati16Piston Wrist Pi17Crank Assembl17Crank18Crank Pi19Crank L20Cranl21Crank22Oil Splas23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spal31Motor Shaft B33Retaining Ring34Shaft Key36Base37Grease Plug38Oil Seal	bly (6)	K6U-A513A	K6U-A513A	K6U-A513A
<ul> <li>15 Oil Regulati</li> <li>16 Piston Wrist Pi Crank Assembl</li> <li>17 Crank</li> <li>18 Crank Pi</li> <li>19 Crank Lo</li> <li>20 Crand</li> <li>21 Crand</li> <li>22 Oil Splas</li> <li>23 Oil S</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splin</li> <li>29 Bearing Space</li> <li>31 Motor Shaft B.</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	g (6)	K6U-337	K6U-337	K6U-337
16Piston Wrist Pi Crank Assembl17Crank Assembl18Crank Mi Crank Di 2020Crank Li Crank Di 2120Crank Di Crank Di 2321Crank Crank22Oil Splas Oil S23Oil S Connecting 2524Connecting Connecting 2725Connecting Connecting 2626Connecting 	ting Piston Ring (6)	K6U-338	K6U-338	K6U-338
Crank Assembli17Crank18Crank Pi19Crank Li20Crank21Crank22Oil Splas23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spacer31Motor Shaft.32Motor Shaft.33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal	Pin (6)	K6U-514	K6U-514	K6U-514
18Crank Pi19Crank L20Cranh21Cranh22Oil Splas23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft32Motor Shaft Bi33Retaining Ring34Shaft Key35Dust Washer36Base37Grease Plug38Oil Seal	bly	K6U-A516	K6U-A516	K6U-A516
18Crank Pi19Crank L20Cranh21Cranh22Oil Splas23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft32Motor Shaft Bi33Retaining Ring34Shaft Key35Dust Washer36Base37Grease Plug38Oil Seal	·	K6U-516	K6U-516	K6U-516
19Crank Lo20Cranh21Cranh22Oil Splas23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal	Pin Sleeve	K6U-519	K6U-519	K6U-519
20Cranl21Cranl22Oil Splas23Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal.	Lock Pin	KU-520	KU-520	KU-520
21Cranl22Oil Splas23Oil S*Oil S*Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal.	nk Lock Pin Nut	D02-317	D02-317	D02-317
22Oil Splas23Oil S24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal.	nk Lock Pin Cotter (1/8" x 1-1/4")	D02-330	D02-330	D02-330
<ul> <li>23 Oil S</li> <li>* Oil S</li> <li>* Oil S</li> <li>24 Connecting</li> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splin</li> <li>29 Bearing Spacer</li> <li>30 Bearing Spa</li> <li>31 Motor Shaft.</li> <li>32 Motor Shaft Be</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	asher	KU-540	KU-540	KU-540
<ul> <li>Oil S</li> <li>Connecting</li> <li>Connecting</li> <li>Connecting</li> <li>Connecting</li> <li>Connecting</li> <li>Crank Valve</li> <li>Crank Valve</li> <li>Crank Splin</li> <li>Bearing Spacer</li> <li>Bearing Spa</li></ul>	Splasher Long Rivet (2)	K6U-541	K6U-541	K6U-541
24Connecting25Connecting26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft.32Motor Shaft.33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal	Splasher Short Rivet (2)	241-712	241-712	241-712
<ul> <li>25 Connecting</li> <li>26 Connecting</li> <li>27 Crank Valve</li> <li>28 Crank Splin</li> <li>29 Bearing Spacer</li> <li>30 Bearing Spa</li> <li>31 Motor Shaft.</li> <li>32 Motor Shaft Be</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer.</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	g Rod (6)	K6U-509	K6U-509	K6U-509
26Connecting27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal.	g Rod Ring (4)	K6U-510	K6U-510	K6U-510
27Crank Valve28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft.32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal	g Rod Bushing (2)	K6U-511	K6U-511	K6U-511
28Crank Splin29Bearing Spacer30Bearing Spa31Motor Shaft.32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal	ve End Bearing.	KU-518	KU-518	KU-518
29Bearing Spacer30Bearing Spa31Motor Shaft.32Motor Shaft Bearing Ring33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal	ned End Bearing	KU-895	KU-895	KU-895
30Bearing Spa31Motor Shaft.32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal		KM-41	KM-41	KM-41
31Motor Shaft.32Motor Shaft Be33Retaining Ring34Shaft Key35Dust Washer.36Base37Grease Plug38Oil Seal	acer Set Screw	C04-31	C04-31	C04-31
<ul> <li>32 Motor Shaft Be</li> <li>33 Retaining Ring</li> <li>34 Shaft Key</li> <li>35 Dust Washer</li> <li>36 Base</li> <li>37 Grease Plug</li> <li>38 Oil Seal</li> </ul>	•••••••••••••••••••••••••••••••••••••••	KM-294A	KM-294A	KM-294A
33Retaining Ring34Shaft Key35Dust Washer36Base37Grease Plug38Oil Seal	Bearing	D10-825	D10-825	D10-825
34         Shaft Key           35         Dust Washer           36         Base           37         Grease Plug           38         Oil Seal	lg	KM-295	KM-295	KM-295
<ul> <li>35</li> <li>36</li> <li>37</li> <li>38</li> <li>38</li> <li>39</li> <li>31</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>37</li> <li>38</li> <li>30</li> <li>30</li> <li>31</li> <li>32</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>37</li> <li>38</li> <li>37</li> <li>39</li> <li>30</li> <li>30</li> <li>31</li> <li>31</li> <li>32</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>35</li> <li>36</li> <li>37</li> <li>37</li> <li>38</li> <li>39</li> <li>30</li> <li>30</li> <li>30</li> <li>30</li> <li>31</li> <li>31</li> <li>32</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>37</li> <li>38</li> <li>39</li> <li>30</li> <li>30</li> <li>30</li> <li>30</li> <li>30</li> <li>30</li> <li>31</li> <li>32</li> <li>32</li> <li>33</li> <li>34</li> <li>35</li> <li>36</li> <li>37</li> <li>36</li> <li>37</li> <li>37</li> <li>38</li> <li>39</li> <li>30</li> <li>3</li></ul>		D04-323	D04-323	D04-323
36         Base            37         Grease Plug           38         Oil Seal		KM-298A	KM-298A	KM-298A
37Grease Plug38Oil Seal		K6M-292	K6M-292	K6M-292
38 Oil Seal	g	D02-351	D02-351	D02-351
		KM-270	KM-270	KM-270
39 Motor Case Ca	ap Screw (12)	215-36	215-36	215-36
	ap Screw Lock Washer (12)	A-67	A-67	A-67
	Sasket	K6U-592	K6U-592	K6U-592

\* Not illustrated.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts, We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

• These parts are used only on Models K6M, KK6M and KK6UM.



		PART NUMBER FOR ORDERING		
		↓	↓	↓
		K6M K6M56	КК6М КК6М56	КК6UM КК6UM56
42	Motor Eyeholt	KU-888	KU-888	KU-888
	rotation (standard)		KK6M-A545	KK6UM-A545
	rotation when facing end of Shaft (special) * for maximum performance in clockwise rota-		KK6M-A500	KK6UM-A500
	tion when facing end of Shaft (special) for counterclockwise rotation when facing end		KK6M-A503	K6U-A545
	of Shaft (standard)	K6M-A545		
	(special)	K6M-A545R		
43	Valve Chest	K6M-545	K6M-545	K6U-545
*	Grease Fitting (2)			23-188
*	1/4'' Pipe Plug (2)			D02-402
• 44	Rotary Valve Bushing	K6U-525	K6U-525	K6U-525
45	Bushing Key (1 for K6M and KK6M; 2 for KK6UM)	HU-538	HU-538	HU-538
46	Reverse Valve Bushing			K6U-945
47	Throttle Lever Spring Stop Pin			D02-553

\* Not illustrated.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts, We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

\* When using this Rotary Valve, motor rotation is reversed with respect to throttle movement.

# PART NUMBER FOR ORDERING

		V	V	•
		K6M K6M56	КК6М КК6М56	КК6UM КК6UM56
48	Rotary Valve			
40	for equal performance in either direction			
	of Shaft rotation (standard)		KK6M-526	KK6M-526
	for maximum performance in counterclockwise			
	rotation when facing end of Shaft (special)		K6U-526R	K6U-526R
	★ for maximum performance in clockwise rota-			
	tion when facing end of Shaft (special)		K6U-526	K6U-526
	for counterclockwise rotation when facing end			
	of Shaft (standard)	K6M-526		
	for clockwise rotation when facing end of Shaft			
	(special)	K6M-526R		
49	Rotary Valve Key	K6U-527	K6U-527	K6U-527
50	Rotary Valve Key Screw (2)	4E-638	4E-638	4E-638
51	Valve Key Screw Lock Washer (2)	4U-58	4U-58	4U-58
52	Reverse Valve			K6U-944
53	Throttle Valve Ball			K6U-941
54	Throttle Valve			K6U-940
55	Throttle Valve Face	<b>-</b>		K6U-259
*	Valve Face Spacer			K6U-280
56	Throttle Valve Face Cap			K6U-257
57	Valve Face Cap Retaining Screw			G57T-634
58	Throttle Valve Spring			D10-275
59	Throttle Valve Cap			K6U-943
60	Valve Chest Cover.	K6M-546	K6M-546	K6U-546
61	Valve Chest Cover Gasket	K6M-928	K6M-928	K6U-928
62	Valve Chest Cover Cap Screw (2)			D02-506
63	Cover Cap Screw Lock Washer (2)			D02-321
64	Valve Chest Cap Screw (4)	K6U-548	K6U-548	K6U-548
65	Valve Chest Cap Screw Lock Washer (4)	D10-322	D10-322	D10-322
66	Throttle Lever			HU-556
67	Throttle Lever Latch			HU-869
68	Latch Spring			HU-567
69	Throttle Lever Set Screw			HU-842
• 70	Throttle Lever Spring			K6U-412
71	Throttle Lever Pin			HU-870
*	Throttle Lever Pin Cotter (2) $(3/32'' \times 3/4'')$			D02-524
72	Throttle Control Arm			K6U-555
73	Throttle Lever Spring Stop Pin			D02-553
74	Street Ell (3)		KX-587	
75	Long Pipe Nipple (2)		KK6M-287	
76	Short Pipe Nipple (2)		KK6M-286	
77	Union Elbow (2)		KX-282	
78	Air Valve		KKM-A291B	
79	Air Valve Lever	 V)( 000	KKM-278B	
80	Globe Valve.	KM-283		
81	Globe Valve Nipple	KM-285		
† 82	Motor Case Cover	K6M-276	K6M-276	K6M-276
•† 83	Oil Seal	KM-271	KM-271	KM-271
† 84	Motor Case Bolt (12)	KX-36	K X-36	KX-36
† 85	Motor Case Bolt Nut (12).	HU-776	HU-776	HU-776

\* Not illustrated.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

\* When using this Rotary Valve, motor rotation is reversed with respect to throttle movement.

† These parts are used only on Models K6M56, KK6M56, and KK6UM56.

## MAINTENANCE TOOLS

PART NUMBER FOR ORDERING	PART NAME FOR ORDERING	OPERATION
HU-932	Valve Chest Jack Bolt (2)	Withdrawing the Valve Chest (43) from the Motor Case (1).
KU-933	Piston Ring Compressor	Compressing the Piston Ring (14) and Oil Regulating Piston Ring (15) in the grooves of the Piston (13) when installing a Cylinder.
49265	Throttle Valve Stem Reamer (for Models	
	KK6UM and KK6UM56)	Reaming the throttle valve stem hole after installing a new Reverse Valve Bushing (46) in the Valve Chest (43).

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