Cross Reference

Honeywell



**Modutrol IV™ Motor Cross Reference For Honeywell and Competitive Motors**



**Honeywell**

**Modutrol IV™ Motor Cross Reference**

FOR HONEYWELL AND COMPETITIVE MOTORS

**CROSS REFERENCE**

**HOW TO USE THIS MANUAL**

Modutrol IV Motor Order Number Guide

This cross reference is intended to aid in selection of new and replacement Modutrol IV Motors. Since publication of the previous edition, several changes in the Modutrol IV Motor product line have occurred. Many specialty models formerly available are replaceable with TRADELINE® models *only*.

To select a Modutrol IV Motor, open to the section for the motor under consideration. Find the motor in the left-most column and read across the page to find appropriate replacement Modutrol IV Motors. For column format explanations, refer to the page preceding the table. Once you have selected a replacement Modutrol IV Motor, turn to the Modutrol IV to Modutrol IV Motor of this manual and compare the data for the selected motor to the data for the original motor as well as to the application. This will ensure proper Modutrol IV Motor selection.

Not all cross referenced motors match exactly. The comments describe differences and indicate necessary actions when replacing the original motor.

OUTPUT DRIVE

|  |  |  |
| --- | --- | --- |
|  | ROTATION | ACTION |
| 4 |  | NON-SPRING RETURN |
| 5 | N.O. | SPRING RETURN |
| 6 | N.O. |
| 1 |  | NON-SPRING RETURN |
| 2 | N.O. | SPRING RETURN Д |

SHAFT

DUAL­ENDED SHAFT

CONTROL SERIES (FIRST TWO DIGITS)

**M9184D1021**

**SPECIFICATION NUMBER**

FURTHER IDENTIFIES MOTOR

41

61

62

71

72

76

81

91

94

SERIES 40, TWO-POSITION, LINE VOLTAGE  
SERIES 60, FLOATING CONTROL

SERIES 60, FLOATING WITH FEEDBACK  
POTENTIOMETER

4-7, 6-9, 10.5-13.5 VDC CONTROL

4-20 mA OR 2-10 VDC CONTROL

14-17 VDC WITH MINIMUM POSITION

SERIES 80, TWO-POSITION, LOW VOLTAGE

SERIES 90, PROPORTIONING CONTROL  
PROPORTIONAL FLAME SAFEGUARD  
FIRING RATE MOTOR

1

*J*

|  |  |  |
| --- | --- | --- |
| TORQUE DESIGNATION | | |
|  | TORQUE | |
| SPRING RETURN | NON-SPRING RETURN |
| 6 |  | 35 LB-IN. |
|  |
| 7 |  | 75 LB-IN. |
| 8 | 60 LB-IN. | 150 LB-IN. |
| 9 |  | 300 LB-IN. |
|  |

**SUFFIX LETTER APPLIES TO ALL MODELS**

1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NUMBER OF AUX. SWITCHES | | | SPECIAL FUNCTION | STROKE | ELECTRICAL ROTATION |
| 0 | 1 | 2 |
| A | В | C | STANDARD | ADJUSTABLE | N.O. |
| **V1** | к | Q | ADJ. ZERO  AND SPAN |
| **w** | - | MINIMUM POSITION |
| D | E | F | STANDARD | ADJUSTABLE | N.O. |
| G | — | — | STANDARD | ADJUSTABLE |

A MODEL NUMBERS IN SHADED AREAS ARE AVAILABLE SPECIAL ORDER ONLY. CONTACT YOUR HONEYWELL SALES REPRESENTATIVE.  
/г\ SUFFIX LETTERS IN BOLD ARE OBSOLETE.

M13696A

***IMPORTANT***

1. *The final choice of a replacement motor is the sole decision of the purchaser. There are often several  
   approaches to replacing a Modutrol*® *Motor. Double-check each cross reference and comments to ensure  
   the correct motor for the application has been chosen.*
2. *Ensure that settings and recommendations for accessories match the application requirements.*
3. *Consider all discrepancies between the original motor and the selected replacement motor when deter-  
   mining whether the selected motor will operate as desired.*
4. *Report any discrepancies you find in the data to your local Honeywell Sales Representative.*

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MODUTROL IV™ MOTOR CROSS REFERENCE

MODUTROL IV CROSS REFERENCE APPLICATION NOTES

This section contains the application of Modutrol IV Motors in replacement situations. In each subsection, additional data is provided about notations listed in the tables. The notations are listed in alphabetical order with the comment in **bold** type. Unless specifically noted, the data refers to any section where the comment appears.

Add Q181 for Slaved Motor Applications

Certain Modutrol II Motors included a second feedback potentiometer, which was used to drive a second Series 90 Motor. They were the last Modutrol Motors to have this feature. The applications that used this feature now require a Q181 mounted on the auxiliary end of the motor to provide control of the second motor. If the master motor uses Series 90 control, (i.e., the controller is T915, L91, T921, etc.) the motors can be run in parallel by using resistor kit 4074BYK or resistor board 221508A.

NOTE: Slaving a second motor to the master motor causes the second motor to lag the first in operation. Depending on the Q181 and stroke adjustment, it may not achieve full stroke. Running two Series 90 Modutrol IV Motors in parallel with the resistor kit will synchronize operation of the two Modutrol IV Motors.

Adjustable Zero and Span

In 4 to 20 mA signal Series 70 applications, a narrower control range is required to provide motor sequencing across the input signal. M744Y and M745Y Modutrol III Motors and M7284Q and M7285Q Modutrol IV Motors were designed for this application. This feature can also be obtained using the Q7230A1006 Interface Module with a Series 91 Motor. The adjustable zero feature allows you to set the point on the input signal where the motor leaves closed and the adjustable span feature allows you to select the change in input signal that causes the motor to run from fully open to fully closed. Refer to Interface Module literature for details.

Auxiliary Switch Settings

When specified, the auxiliary switch setting indicates the factory set switching action. If no setting is listed, the switches were not set at the factory and can be set at any motor stroke position. It is the responsibility of the installer to ensure correct operation of the auxiliary switches when the replacement Modutrol IV Motor is installed.

Check Voltage

When a comment regarding checking the original application and replacement motor voltage supplies appears, the cross referenced motor may not have the correct voltage, and some adjustment needs to be made. If possible, change motor voltage requirements to agree with the application. If necessary, an internal or external transformer can be added to the motor. If the replacement motor has a transformer where 24 Vac operation is required, the transformer can be removed. For additional information, refer to the cross reference listing and literature for the motor selected.

**CAUTION**

**Equipment Damage Hazard.**

**Removal of an isolation transformer can result in motor damage.**

Leave 24 Vac to 24 Vac isolation-type transformers in the replacement motor.

Change Control Circuit to 24 Vac

Certain Modutrol I and Modutrol II Motors were designed with line voltage submotors. Accordingly, the controllers for these motors switched line voltage to the motor to drive the motor open or closed. This application is similar to the external balance relay application (see the No Internal Balance Circuit section). Modutrol III and Modutrol IV Motors were designed with 24 Vac submotors. Motors listed as replacements for line voltage versions list a transformer to match the original input voltage. To complete the circuit, the switching must be changed to provide dry contact closures capable of 24 Vac operation. A difficulty arising from this change is the requirement of supplying line voltage to the Modutrol IV Motor. In most cases, this involves running one or two new wires to the motor. However, if you modify the controller to supply 24 Vac to the motor coils, additional wiring can be avoided. In this alternative, place the transformer in the circuit ahead of both the controller and the motor and original wiring will operate.

Control Signal

This section described the various input signals listed in the signal columns: **Digital:** Specifically, M7405 Economizer Motor which will operate only with T7400/ W7400 systems.

**Series 40 (41):** Line voltage, single pole, single throw (spst) switching. Motor runs full stroke on contact closure, and spring-returns when contact opens.

**Series 60 (61):** Three-wire, single pole, double throw (spdt) switching. Responds to either spst (three-wire) contacts or three-wire floating control (drive open, off, drive closed). Series 60 (61) motors may be either line or low voltage. Modutrol III and Modutrol IV Motors require low voltage switch contacts.

**Series 62:** similar to Series 60 (61), but includes feedback potentiometer. Responds to either spst (three-wire) contacts or three-wire floating control (drive open, off, drive closed). The three-wire feedback potentiometer provides a position indication to the controller. See No Internal Balance Circuit (Series 62 Modutrol IV) section.

**Series 70 (71,72,73,74,76,79):** Voltage, current and specialty inputs. Appropriate input signal is listed for each motor.

**Series 80 (81):** Low voltage, spst (spst) switching. Motor runs full stroke on contact closure, and spring-returns when contact opens.

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**Series 90 (91, 94) 135 Ohm:** Three-wire potentiometer input. Based on 135 ohm potentiometers found in controls such as L91, Q181, Q209, S963B, T915, T991, and T921. The Modutrol III and Modutrol IV Motors operate with electronic Series 90 outputs such as those found in T775E, T775F, T775G, W973B, W7100D, and W7100E. Modutrol I and Modutrol II Motors will not operate with electronic inputs, while Modutrol III and Modutrol IV Motors will operate with either electronic or potentiometer inputs.

**SPST:** See Series 40 and 80.

**Thermistor:** Motor works with a specific thermistor input. Consult specification for original motor for details.

**W936 (W945):** The W936 are control systems utilizing a voltage output to position a damper or valve motor. Voltage range is approximately 0.7 (fully-closed) to 1.9 Vdc (fully- open).

Customer Names

Specific customer names in the comments column indicate the motor was originally built around specific OEM customer application requirements. Some of the requirements allow the original to be cross referenced to a Modutrol IV Motor. If no replacement is listed, please contact the OEM or their local agent for assistance in replacing the original motor.

Motor Not Crossed To Modutrol IV

If no Modutrol IV Motor cross reference is listed because of specifications, some critical feature included in the original is not duplicated in functional replacements or TRADELINE motors. In these cases, the original motor will cross reference to itself, rather than to a Modutrol IV Motor and no TRADELINE model will be listed. For further information on these motors, contact your local Honeywell sales representative.

NOTE: Consider all Modutrol I, II and III Motors obsolete.

No Internal Balance Circuit (Series 62 Modutrol IV)

When Modutrol Motors included a mechanical balance relay (Modutrol I and II), they were susceptible to vibration. To solve this issue, a Series 90 Modutrol Motor was designed which allowed the balance relay to be remote-mounted in a location with less or no vibration. The motors were the M944E,B,G,S, M945B,C,G. The balance relay was the R927. The motor-relay combination acted the same as a Series 90 Modutrol Motor. These motors were also used with other controllers over the years and, as a result, the

Series 90 designation is confusing. With the introduction of Modutrol IV Motors, these motors were designated Series 62. The motor acts on inputs exactly the same as Series 61. It also includes a feedback potentiometer. To use Series 62 Modutrol IV Motors in R927 applications, a Q181 feedback potentiometer is required to provide the feedback signal to the R927. The higher current of the R927 burns out the Series 62 Modutrol IV Motor internal feedback potentiometer. A low current source does not. This allows it to be used in applications requiring position feedback to a control system.

NOTE: When replacing a motor that was connected to a balancing relay, Honeywell recommends performing a retrofit to remove the relay and the old motor. Replace both with one Series 90 Modutrol IV motor (that is, do not replace the relay).

Normally Open (N.O.) / Normally Closed (N.C.)

This indicates how the motor rotates, usually in reference to the spring return action. It also indicates electrical response to input signals. Most motors are normally closed, so unless normally open is indicated, the motor is normally closed. When referencing electrical operation, this indicates response to the input signal. Viewed from the power end of motor, an increase in signal causes the shaft to rotate clockwise for a normally closed motor. A normally open motor rotates counterclockwise on the same signal increase. When the signal is removed, all motors (except for Series 60 and 62) return to normal position, closed for normally closed, or open for normally open.

Set To... (Voltage, Current, or Rotation)

A note specifying a signal range or rotation choice indicates a setting on the interface module listed under Accessories. Please refer to the literature shipped with the interface module for details.

Ship Position (90 Or 160 Degrees)

Indicates factory stroke setting of adjustable stroke motors. TRADELINE models are shipped in the 160 degree position. To adjust the stroke setting, refer to the literature shipped with the Modutrol IV Motor.

Tapped Auxiliary Shaft

These motors include a tapping in the auxiliary shaft end as well as in the power shaft. Some OEM customers use this tapping to mount specific accessories to the motor when used in their equipment. The tapping is 8-32 UNC-2B x 0.56 in. deep.

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TRADELINE

Indicates the original motor is a TRADELINE model. Modutrol IV TRADELINE Motors have the following features: 24 Vac, cams installed for addition of auxiliary switches, adjustable stroke (except for M6285A1005 and M6285A1013), and the auxiliary end shaft can accept a Q5001 Valve Linkage. There are several Modutrol IV TRADELINE Motors that cover the entire range of input signals. Each motor can be configured to replace multiple other models.

25 Hz

Motors marked 25 Hz were designed to operate at a line or low voltage with 25 Hz rather than 50/60 Hz. Motors not specifically indicated are 50/60 Hz.

Unidirectional Drive

Specifically, some competitive motors and Modutrol I M204 motors are listed as unidirectional drive. This indicates a SPDT, low-voltage control circuit. On the initial call, the motor rotates clockwise through 180 degrees. On the second call, the motor rotates clockwise another 180 degrees to return to normal position.

Weather Kit Installed

This indicates the appropriate weatherproofing kit is installed at the factory. Modutrol IV Motors are rated at NEMA 3 when mounted in an upright position. Addition of a weatherproofing kit extends this rating to side and upside down mounting arrangements.

*IMPORTANT*

|  |  |
| --- | --- |
| NOTE: | *In all applications, the motor must be mounted with the shaft horizontal to main­tain normal motor life.*  Motors previous to Modutrol IV are not NEMA rated and therefore required a weatherproofing kit that requires a NEMA 3 rating, regardless of mounting ori­entation. |

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MODUTROL IV™ MOTOR CROSS REFERENCE

COMPETITIVE MOTORS TO MODUTROL IV MOTORS

This section cross references motors produced by Barber-Colman, Johnson, and White Rodgers to Modutrol IV Motors. Please refer to the Application Notes section for specific comments.

Cross Reference Format

Information contained in individual rows refer to the motor listed in the OS # to be Replaced column unless otherwise noted in the Comments column. Following is an example of the format used in this section and explanations of each column.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be**  **Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Model**  **Number** | **Required Transformer** | **Required**  **Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

1. Lists the original motor to be replaced.
2. Lists the Modutrol IV TRADELINE Replacement Motor. This TRADELINE motor may require configuration with the accessories listed in columns 3 through 7 and 15.
3. Specifies which internal mount transformer, if any, is required to match the original motor voltage. The transformer choices are:
4. 198162AA - 120/208/240 Vac, 50/60 Hz (multi-tap).
5. 198162EA - 120 Vac, 50/60 Hz.
6. 198162GA - 220 Vac, 50/60 Hz.
7. 198162JA - 24 Vac, 50/60 Hz (isolation).
8. Specifies which field-addable auxiliary switch, if any, is required to match the original motor. The switch kit choices are:
9. 220736A - one spdt switch and mounting bracket.
10. 220736B - two spdt switches and mounting bracket.
11. Specifies which accessory parts or devices, if any, are required to complete the replacement. Items include Weatherproofing Kits, Minimum Position Potentiometers, and linkages. Check the original application to ensure that you account for all modifications of the original motor.
12. Specified stroke setting of the Modutrol IV TRADELINE Motor. 12 of the 14 TRADELINE models have adjustable stroke. The remaining two (M6285A) are fixed stroke. “ADJ” listed here indicates the original motor also had adjustable stroke. Check the application to duplicate the original stroke requirements.
13. Lists the voltage of the original motor.
14. Lists the torque rating of the original motor.
15. Lists the full stroke rotation of the original motor (closed to open) in angular degrees. Two values with a “-” indicate a range of adjustment available in the field.
16. Lists the timing of the original motor. If two or adjustable stroke is listed in column 10, the time refers to a 160 degree stroke.
17. Lists the number of auxiliary switches, if any in the original motor.
18. Lists the control signal of the motor. The listing can specify either an actual value of signal input, or a “Series” designation. Please refer to the Application Notes section in this manual.
19. Lists the functional Modutrol IV Motor replacement. In some cases, the replace­ment will have additional features not found in the original motor. This column can also specify “+” and an accessory. This indicates a minor addition to the functional replacement will provide the functionality required in the application.
20. Comments listed in this column provide additional information to consider when replacing the original motor. Consider differences carefully prior to installation of the Modutrol IV TRADELINE Motor.

***IMPORTANT***

*When replacing competitive motors, check the valve or damper linkage. In some cases, both the motor and the linkage will require replacement due to physical size incompatibility between the Modutrol IV Motors and some competitive motors.*

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 1. Competitive Modutrol Motor Cross Reference.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| **BARBER COLMAN - TAC** | | | | | | | | | | | | | |
| MA-12313 | None |  |  |  |  | 24 | 25 | 75-180° | 28 |  | spst | M8415A1004 | 90 sec, 1 aux switch |
| MA-12323 | None |  |  |  |  | 24 | 25 | 75-180° | 28 | 2 | spst | M8415A1004 |  |
| MA-305 | None |  |  |  |  | 24 | 16 | 180° | 20 |  | spst | M836A1042 | 75° stroke, 30 sec, 32-125°F |
| MA-305-500 | None |  |  |  |  | 24 | 16 | 180° | 20 | 1 | spst | M836A1042 |  |
| MA-318 | M8185D1006 |  |  |  | 160° | 24 | 60 | 180° | 20 |  | spst | M8185D1006 | 160° stroke, 60 sec |
| MA-318-500 | M8185D1006 |  | 220736A |  | 160° | 24 | 60 | 180° | 20 | 1 | spst | None |  |
| MA-405 | None |  |  |  |  | 120 | 16 | 180° | 20 |  | spst | M436A1116 | 75° stroke, 30 sec, 32-125°F |
| MA-405-500 | None |  |  |  |  | 120 | 16 | 180° | 20 | 1 | spst | M436A1116 |  |
| MA-406 | None |  |  |  |  | 208 | 16 | 180° | 20 |  | spst | M836A1042 | Requires 208 Vac transformer |
| MA-406-500 | None |  |  |  |  | 208 | 16 | 180° | 20 | 1 | spst | M836A1042 |  |
| MA-407 | None |  |  |  |  | 240 | 16 | 180° | 20 |  | spst | M436A1124 | 75° stroke, 30 sec, 32-125°F |
| MA-407-500 | None |  |  |  |  | 240 | 16 | 180° | 20 | 1 | spst | M436A1124 |  |
| MA-416 | M8185D1006 | 50017460-001 |  |  | 160° | 208 | 60 | 180° | 20 |  | spst | M4185B1058 | 160° stroke, 60 sec  M8185D: 60 sec |
| MA-416-500 | M8185D1006 | 50017460-001 | 220736A |  | 160° | 208 | 60 | 180° | 20 | 1 | spst | M4185B1058 |  |
| MA-418 | M8185D1006 | 50017460-003 |  |  | 160° | 120 | 60 | 180° | 20 |  | spst | M4185A1001 |  |
| MA-418-500 | M8185D1006 | 50017460-003 | 220736A |  | 160° | 120 | 60 | 180° | 20 | 1 | spst | M4185B1009 |  |
| MA-419 | M8185D1006 | 50017460-001 |  |  | 160° | 240 | 60 | 180° | 20 |  | spst | M4185B1058 | 160° stroke, 60 sec TRADELINE is 60 sec |
| MA-419-500 | M8185D1006 | 50017460-001 | 220736A |  | 160° | 240 | 60 | 180° | 20 | 1 | spst | M4185B1058 |  |
| MA-5330 | None |  |  |  |  | 120 | 20 | 2 |  |  | spst | None | MA-5330: Damper DCA |
| MA-5333 | None |  |  |  |  | 24 | 20 | 2 |  |  | spst | None | MA-5333: Damper DCA |
| MA5-419 | M8185D1006 | 50017460-001 |  |  | 160° | 240 | 60 | 170° | 20 |  | spst | M4185B1058 | MA5 includes special |
| MA5-419-500 | M8185D1006 | 50017460-001 | 220736A |  | 160° | 240 | 60 | 170° | 20 | 1 | spst | M4185B1058 |  |
| MC-351 | M6194D1017 |  | 220736A |  | 160° | 24 | 220 | 180° | 70 | 1 | spdt | None | Original: unidirectional operation TRADELINE is 240 sec |
| MC-421 | M6184D1035 | 50017460-003 | 220736A |  | 160° | 120 | 175 | 180° | 20 | 1 | spdt | None | Original: unidirectional operation TRADELINE is 60 sec |
| MC-431 | M6194D1017 | 50017460-001 | 220736A |  | 160° | 120 | 220 | 180° | 30 | 1 | spdt | None | Original: unidirectional operation TRADELINE is 240 sec |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 1. Competitive Modutrol Motor Cross Reference.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| MC-4311 | M6194D1017 | 50017460-001 | 220736A |  | 160° | 240 | 220 | 180° | 30 | 1 | spdt | None |  |
| MC5-4311 | M6194D1017 | 50017460-001 | 220736B | ES-650 | 160° | 120 | 220 | 180° | 36 | 1 | spdt | None | Original: unidirectional operation TRADELINE is 240 sec; ES-650 is explosion proof housing (see Accessories) |
| MC-9610 | None |  |  |  |  | 120 | 1100 | 180° | 65 | 1 | spdt | None | Original: unidirectional operation |
| MC-9810 | None |  |  |  |  | 120 | 1300 | 180° | 115 | 1 | spdt | None |  |
| ME-12313 | None |  |  |  |  | 24 | 25 | 110° | 28 (90°) |  | 3-position | M8405A1006 | Original: economizer |
| ME-12313-102 | None |  |  |  |  | 24 | 25 | 110° | 28 (90°) | 2 | 3 position | M8405A1006 |  |
| MP-2110 | None |  |  |  |  | 120 | 50 | 180° | 25 | 1 | CP-8000 | None |  |
| MP-2113-500 | M6184D1035 |  | 220736A |  | 160° | 24 | 50 | 180° | 25 | 1 | spdt | M6184D1001 + Q607A | 75 lb-in, 60 sec  TRADELINE is 60 sec, 150 lb-in |
| MP-2130-500 | M6184D1035 | 50017460-003 | 220736A |  | 90° | 120 | 50 | 90° | 13 | 1 | spdt | M6184D1001 + Q607A |  |
| MP-2150-500 | M6184D1035 | 50017460-003 | 220736A |  | 160° | 120 | 50 | 180° | 25 | 1 | spdt | M6184A1023 + Q607A |  |
| MP-2151-500 | M6184D1035 | 50017460-001 | 220736A |  | 160° | 240 | 50 | 180° | 30 | 1 | spdt | None | TRADELINE is 60 sec, 150 lb-in |
| MP-371 | M6294D1008-S |  | 220736A |  | 160° | 24 | 50 | 180° | 90 | 1 | spdt | None | TRADELINE is 160°, 240 sec |
| MP-381 | M6194D1017 |  | 220736A |  | 160° | 24 | 220 | 180° | 130 | 1 | spdt | None | Replacement is 160°, 240 sec  TRADELINE is 160°, 240 sec |
| MP-481 | M9194D1003 | 50017460-003 | 220736A | Q7230A | 160° | 120 | 220 | 180° | 130 | 1 | 2-15 Vdc | None | Set signal range |
| MP-483-600 | M6294D1008-S | 50017460-003 | 220736A |  | 90° | 120 | 220 | 90° | 65 | 1 | spdt | M6294D1008-S | Check timing and stroke |
| MP-485 | M6194D1017 | 50017460-003 | 220736A |  | 160° | 120 | 220 | 180° | 130 | 1 | spdt | None |  |
| MP-4851 | M6294D1008-S | 50017460-001 | 220736A |  | 160° | 240 | 220 | 180° | 130 | 1 | CP-8000 | None |  |
| MP-486 | M6294D1008-S | 50017460-003 | 220736A |  | 160° | 120 | 220 | 180° | 130­  1300 | 1 | spdt | None |  |
| MP-9710 | None |  |  |  |  | 120 | 800 | 180° | 135 | 1 | Proportional | None |  |
| MU-12313 | None |  |  |  |  | 24 | 25 | 90° | 28 |  | Economizer | M7415A1006 |  |
| **PENN JOHNSON** | | | | | | | | | | | | | |
| M110AAB-1 | M8185D1006 | 50017460-003 | 220736A |  | ADJ | 120 | 25 | 45-270° | 60 | 1 |  | None |  |
| M110AGA-1 | M8185D1006 |  |  |  | ADJ | 24 | 25 | 45-270° | 60 |  |  | None |  |
| M110AGB-1 | M8185D1006 |  | 220736A |  | ADJ | 24 | 25 | 45-270° | 60 | 1 |  | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 1. Competitive Modutrol Motor Cross Reference.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M110GGA-1 | M9185D1004 |  | 220738A | Q7230A |  |  |  |  |  |  |  | None |  |
| M110JGA-1 | M9185D1004 |  |  |  | ADJ | 24 | 25 | 65-270° | 60 |  |  | M9184D1004 + 220738A | Replacement is 90°-160° stroke |
| M110JGB-1 | M9185D1004 |  | 220736A |  | ADJ | 24 | 25 | 65-270° | 60 |  |  | M9184D1004 + 220738A |  |
| M110QGA-1 | None |  |  |  |  |  |  |  |  |  |  | None |  |
| M120AAA-1 | M6184D1035 | 50017460-003 |  |  | ADJ |  |  |  |  |  |  | None |  |
| M120AAB-1 | M8185D1006 | 50017460-003 | 220736A |  | ADJ |  |  |  |  |  |  | None |  |
| M120AAC-1 | M6184D1035 | 50017460-003 | 220736B |  | ADJ |  |  |  |  |  |  | None |  |
| M120AGA-1 | M6184D1035 |  |  |  | ADJ |  |  |  |  |  |  | None |  |
| M120GGA-1 | M9164D1009 |  |  | Q7230A | ADJ |  |  |  |  |  |  | None | Select signal range |
| M120JAA-1 | M9164D1009 | 50017460-003 |  |  | ADJ | 120 | 35 | 65-270° | 60 |  |  | M9164D1009 | Replacement is 90°-160° stroke |
| M120JAC-1 | M9164D1009 |  | 220736B |  | ADJ | 24 | 35 | 65-270° | 60 | 2 |  | M9164C1068 |  |
| M120JGA-1 | M9164D1009 |  |  |  | ADJ | 24 | 35 | 65-270° | 60 |  |  | M9164A1005 | M9164A1005: wire to 24 Vac |
| M120QGA-1 | None |  |  |  |  |  |  |  |  |  |  | None |  |
| M130AGA-1 | M8185D1006 |  |  |  | ADJ | 24 | 50 | 45-270° | 60 |  |  | None | Replacement is 90°-160° stroke |
| M130AGB-1 | M8185D1006 |  | 220736A |  | ADJ | 24 | 50 | 45-270° | 60 | 1 |  | None |  |
| M130GGA-1 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 65-270° | 60 |  |  | M7285Q1008 | Replacement is 90°-160° stroke |
| M130JGA-1 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 65-270° | 60 |  |  | M9185A1018 |  |
| M130JGB-1 | M9185D1004 |  | 220736A |  | ADJ | 24 | 50 | 65-270° | 60 | 1 |  | M9185E1019 | Replacement is 90°-160° stroke |
| M130QGA-1 | None |  |  |  |  |  |  |  |  |  |  | None |  |
| M140AAA-1 | M6184D1035 |  |  |  | ADJ |  |  |  |  |  |  | None |  |
| M140AGA-1 | M6184D1035 |  |  |  | ADJ |  |  |  |  |  |  | None |  |
| M140GGA-1 | M9174D1007 |  |  | Q7230A | ADJ |  |  |  |  |  |  | None | Select signal range |
| M140JAA-1 | M9174D1007 | 50017460-003 |  |  | ADJ | 120 | 70 | 65-270° | 60 |  |  | M9174D1007 | Replacement is 90°-160° stroke |
| M140JGA-1 | M9174D1007 |  |  |  | ADJ | 24 | 70 | 65-270° | 60 |  |  | M9174D1007 |  |
| M150AGA-1 | M6184D1035 |  |  |  | ADJ | 24 | 150 | 65-270° | 60 |  |  | M6184D1035 |  |
| M150AGB-1 | M6184D1035 |  | 220736A |  | ADJ | 24 | 150 | 65-270° | 60 | 1 |  | None |  |
| M150GGA-1 | M9184D1021 |  | 220738A | Q7230A | ADJ |  |  |  |  |  |  | None | Select signal range |
| M150JGA-1 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 65-270° | 60 |  |  | M9184A1019 |  |
| M150JGB-1 | M9184D1021 |  | 220736A |  | ADJ | 24 | 150 | 65-270° | 60 | 1 |  | M9184F1034 | Replacement is 90°-160° stroke |
| M150JGC-1 | M9184D1021 |  | 220736B |  | ADJ | 24 | 150 | 65-270° | 60 | 2 |  | M9184F1034 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 1. Competitive Modutrol Motor Cross Reference.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M150QGA-1 | None |  |  |  |  | 24 | 150 | 65-270° | 60 |  |  | M7284Q1009 |  |
| M40AAA-1 | M9164D1009 | 50017460-003 |  |  | 90° | 120 | 35 | 90° | 34 |  |  | M9164A1005 |  |
| M40AAC-1 | M9164D1009 | 50017460-003 | 220736B |  | 90° | 120 | 35 | 90° | 34 | 2 |  | M9164C1068 |  |
| M40AGA-1 | M6184D1035 |  |  |  | 90° | 24 | 35 | 90° | 34 |  |  | M6184A1015 |  |
| M40AGC-1 | M9164D1009 |  | 220736B |  | 90° | 24 | 35 | 90° | 34 | 2 |  | None |  |
| M80AAA-3 | M6284D1000-S |  |  |  |  |  |  |  |  |  |  | M6284F1013-S | Check voltage & stroke of motor |
| M80AAB-1 | M6284D1000-S |  | 220736B |  |  |  |  |  |  |  |  | M6284F1013-S |  |
| M80ACA-1 | M6285A1005-S |  |  |  |  |  |  |  |  |  |  | M6285A1005-S | Check voltage & stroke of motor |
| M80ADA-1 | M6285A1005-S |  |  |  |  |  |  |  |  |  |  | M6285A1005-S |  |
| M80BAA-1 | M9184D1021 |  |  |  |  |  |  |  |  |  |  | M9184A1019 |  |
| M80BAA-4 | None |  |  |  |  |  |  |  |  |  |  | M9184D1005 |  |
| M80BCA-1 | M9185D1004 |  |  |  |  |  |  |  |  |  |  | M9185D1004 |  |
| M80BDA-1 | M9185D1004 |  |  |  |  |  |  |  |  |  |  | M9185D1004 |  |
| M80BEA-1 | M9185D1004 |  |  |  |  |  |  |  |  |  |  | M9185A1018 | replacemement is Nornally Closed |
| M80FAA-2 | M9184D1021 |  |  |  |  |  |  |  |  |  |  | M9184A1019 | Check voltage & stroke of motor |
| M80FCA-2 | M9185D1004 |  |  |  |  |  |  |  |  |  |  | M9185D1004 |  |
| M80FDA-1 | M9185D1004 |  |  |  |  |  |  |  |  |  |  | M9185D1004 |  |
| M80FEA-1 | M9185D1004 |  |  |  |  |  |  |  |  |  |  | M9185A1018 | Replacement is Normally Closed |
| M80FFA-1 | M9185D1004 |  |  |  |  |  |  |  |  |  |  | M9185A1018 | Check voltage & stroke of motor |
| M80HAB-1 | M9184D1021 |  |  |  |  |  |  |  |  |  |  | M9184F1034 |  |
| M80HAC-1 | M9184D1021 |  |  |  |  |  |  |  |  |  |  | M9184F1034 |  |
| M80JAA-2 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 65-240° | 60 |  |  | M9184A1019 | Replacement is 90°-160° stroke |
| M80JAB-1 | M9184D1021 |  | 220736A |  | ADJ | 24 | 150 | 65-240° | 60 | 1 |  | M9184F1034 |  |
| M80JAC-1 | None |  |  |  |  | 24 | 150 | 65-240° | 60 | 2 |  | M9484E1017 |  |
| M80JCA-2 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 65-180° | 60 |  |  | M9185A1018 |  |
| M80JCB-1 | M9185D1004 |  | 220736A |  | ADJ | 24 | 50 | 65-180° | 60 | 1 |  | M9185E1019 |  |
| M80JDA-1 | None |  |  |  |  |  |  |  |  |  |  | None |  |
| M80JFA-1 | None |  |  |  |  |  |  |  |  |  |  | None |  |
| M81AAA-12 | M6184D1035 |  |  |  | ADJ | 24 | 150 | 65-270° | 60 |  |  | M6184F1014 | Replacement is 90°-160° stroke |
| M81AAA-13 | M6184D1035 |  |  |  | ADJ | 24 | 80 | 65-270° | 30 |  |  | M6184D1001 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 1. Competitive Modutrol Motor Cross Reference.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M81AAB-5 | M6184D1035 |  | 220736A |  | ADJ | 24 | 150 | 65-270° | 60 | 1 |  | M6184F1014 |  |
| M81AAC-1 | M6184D1035 |  |  |  |  |  |  |  |  |  |  | M6184F1014 |  |
| M81ACA-3 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160° | 60 |  |  | M8185D1006 |  |
| M81ACB-1 | M8185D1006 |  | 220736A |  | 160° | 24 | 50 | 160° | 60 | 1 |  | None |  |
| M81ADA-2 | M8185D1006 | 50017460-001 |  |  | 160° | MULTI | 75 | 160° | 60 |  |  | M4185B1058 |  |
| M81AEA-2 | M8185D1006 | 50017460-001 |  |  | 160° | MULTI | 75 | 160° | 60 |  |  | M4185B1009 |  |
| M81AFA-2 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160° | 60 |  |  | None | Use aux shaft |
| M81AFB-1 | M8185D1006 | 50017460-001 |  |  |  |  |  |  |  |  |  | M4185B1058 | Check stroke and aux switch |
| **WHITE RODGERS** | | | | | | | | | | | | | |
| 3402-7 | None |  |  |  |  | 24 | 25 | 110° |  |  |  | M8415A1004 | 90 sec, 90° |
| 3402A-7 | None |  |  |  |  | 120 | 25 | 110° |  |  |  | None |  |
| 3403-4 | None |  |  |  |  | 24 | 25 | 110° |  |  |  | M8405A1006 | 90 sec, 90° |
| 3405-2 | None |  |  |  |  | 24 | 20 | 90° |  |  |  | M836A1042 | 30 sec, 75° |
| 3405-3 | None |  |  |  |  | 24 | 25 | 90° |  |  |  | M836A1042 |  |
| 3405A-2 | None |  |  |  |  | 120 | 25 | 90° |  |  |  | M436A1116 |  |
| 3405-11 | None |  |  |  |  | 24 | 25 | 90° |  | 1 |  | M836A1042 | 30 sec, 75° |
| 3405A-11 | None |  |  |  |  | 120 | 25 | 90° |  | 1 |  | M436A1116 |  |
| 3405-14 | None |  |  |  |  | 24 | 25 | 90° |  | 1 |  | M836A1042 |  |
| 3420-4 | M9185D1004 |  | 220738A |  |  | 24 | 25 | 90° |  |  |  | M9185D1004 W/220738A | 30 sec |
| 3420A-4 | M9185D1004 | 50017460-003 | 220738A |  |  | 120 | 25 | 90° |  |  |  | M9185D1004 W/220738A |  |
| 3430-7 | None |  |  |  |  | 24 | 25 | 90° |  |  |  | M7415A1006 | 30 sec |
| 3430-18 | None |  |  |  |  | 24 | 25 | 90° | 25 |  |  | None |  |
| 3430-21 | None |  |  |  |  | 24 | 25 | 90° | 25 |  |  | None |  |
| 3440-4 | M9184D1021 |  |  |  |  | 24 | 100 | 160° | 30 |  |  | M9184A1019 | 150 lb-in, 60 sec |
| **SIEMENS** | | | | | | | | | | | | | |
| SQM50.261R1G3 |  |  |  |  |  | 110 | 90 |  | 8 |  | 4-20mA | M7284C1000 | Q607 to add more switches |
| SQM50.261R1Z3 |  |  |  |  |  | 110 | 90 |  | 8 |  | all | M9184C1031+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM50.264R1G |  |  |  |  |  | 110 | 90 |  | 8 |  | 4-20mA | M7284C1000 | Q607 to add more switches |
| SQM50.264R1G4 |  |  |  |  |  | 110 | 90 |  | 8 |  | 4-20mA | M7284C1000 | Q607 to add more switches |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 1. Competitive Modutrol Motor Cross Reference.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| SQM50.264R1Z3 |  |  |  |  |  | 110 | 90 |  | 8 |  | all | M9184C1031+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM50.361R1G |  |  |  |  |  | 110 | 140 |  | 12 |  | 4-20mA | M7284C1000 | Q607 to add more switches |
| SQM60.361r1z3 |  |  |  |  |  | 110 | 140 |  | 12 |  | all | M9184C1031+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM50.364R1G |  |  |  |  |  | 110 | 140 |  | 12 |  | 4-20mA | M7284C1000 | Q607 to add more switches |
| SQM50.364R1Z3 |  |  |  |  |  | 110 | 140 |  | 12 |  | all | M9184C1031+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM50.461R1G3 |  |  |  |  |  | 110 | 140 |  | 25 |  | 4-20mA | M7284C1000 | Q607 to add more switches |
| SQM50.461R1H3 |  |  |  |  |  | 110 | 140 |  | 25 |  | 135 ohm | M9184C1031+50017460-  003 | Q607 to add more switches |
| SQM50.461R1Z |  |  |  |  |  | 110 | 140 |  | 25 |  | all | M9184C1031+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM50.464R8G |  |  |  |  |  | 24 | 140 |  | 25 |  | 4-20mA | M7284C1000+50017460-  001 | Q607 to add more switches |
| SQM50.464R1G |  |  |  |  |  | 110 | 140 |  | 25 |  | 4-20mA | M7284C1000 | Q607 to add more switches |
| SQM50.464R1H3 |  |  |  |  |  | 110 | 140 |  | 25 |  | 135 ohm | M9184C1031+50017460-  003 | Q607 to add more switches |
| SQM50.464R8H3 |  |  |  |  |  | 24 | 140 |  | 25 |  | 135 ohm | M9184C1031 | Q607 to add more switches |
| SQM50.464R1Z3 |  |  |  |  |  | 110 | 140 |  | 25 |  | all | M9184C1031+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM50.464R2Z3 |  |  |  |  |  | 220 | 140 |  | 25 |  | all | M9184C1031+  Q7230A1005+50017460-  001 | Q607 to add more switches |
| SQM50.464R8Z3 |  |  |  |  |  | 24 | 140 |  | 25 |  | all | M9184C1031+  Q7230A1005 | Q607 to add more switches |
| SQM53.461R1Z3 |  |  |  |  |  | 110 | 200 |  | 25 |  | all | M9194D1003+220736+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM53.464R1G |  |  |  |  |  | 110 | 200 |  | 25 |  | 4-20mA | M7294A1010+220736B | Q607 to add more switches |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 1. Competitive Modutrol Motor Cross Reference.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| SQM53.464R1Z3 |  |  |  |  |  | 110 | 200 |  | 25 |  | all | M9194D1003+220736B+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM53.464R2Z3 |  |  |  |  |  | 220 | 200 |  | 25 |  | all | M9194D1003+220736B+  Q7230A1005+50017460-  001 | Q607 to add more switches |
| SQM56.564R1G |  |  |  |  |  | 110 | 310 |  | 37 |  | 4-20mA | M7294A1010+220736B | Q607 to add more switches |
| SQM56.564R1H4 |  |  |  |  |  | 110 | 310 |  | 37 |  | 135 ohm | M9194D1003+220736B+5  0017460-003 | Q607 to add more switches |
| SQM56.564R1Z3 |  |  |  |  |  | 110 | 310 |  | 37 |  | all | M9194D1003+220736B+  Q7230A1005+50017460-  003 | Q607 to add more switches |
| SQM56.664R1G3 |  |  |  |  |  | 110 | 400 |  | 50 |  | 4-20mA | M7294A1010+220736B | Q607 to add more switches |
| SQM56.664R2G3R |  |  |  |  |  | 220 | 400 |  | 50 |  | 4-20mA | M7294A1010+220736B+5  0017460-001 | Q607 to add more switches |
| SQM56.664R1H3 |  |  |  |  |  | 110 | 400 |  | 50 |  | 135 ohm | M9194D1003+220736B+5  0017460-003 | Q607 to add more switches |
| SQM56.664R1Z3 |  |  |  |  |  | 110 | 400 |  | 50 |  | all | M9194D1003+220736B+  Q7230A1005+50017460-  001 | Q607 to add more switches |
| SQM56.667R1G |  |  |  |  |  | 110 | 400 |  | 50 |  | 4-20mA | M7294A1010+220736B | Q607 to add more switches |
| SQM56.667R1Z3 |  |  |  |  |  | 110 | 400 |  | 50 |  | all | M9194D1003+220736B+  Q7230A1005+50017460-  001 | Q607 to add more switches |

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MODUTROL IV™ MOTOR CROSS REFERENCE

OTHER HONEYWELL MOTORS TO MODUTROL IV MOTORS

This section cross references motors produced by Honeywell (which are not Modutrol

Motors) to Modutrol IV Motors where appropriate. Please refer to the Application Notes section for specific comments.

Cross Reference Format

Information contained in individual rows refer to the motor listed in the OS # to be

Replaced column unless otherwise noted in the Comments column. Following is an example of the format used in this section and explanations of each column.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model**  **Number** | **Transformer** | **Aux.**  **Switch** | **Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing (seconds)** | **Aux.**  **Sw** | **Control**  **Signal** |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

1. Lists the original motor to be replaced.
2. Lists the Modutrol IV TRADELINE Replacement Motor. This TRADELINE motor may require configuration with the accessories listed in columns 2 through 7 and 15.
3. Specifies which internal mount transformer, if any, is required to match the original motor voltage. The transformer choices are:
4. 198162AA - 120/208/240 Vac, 50/60 Hz (multi-tap).
5. 198162EA - 120 Vac, 50/60 Hz.
6. 198162GA - 220 Vac, 50/60 Hz.
7. 198162JA - 24 Vac, 50/60 Hz (isolation).
8. Specifies which field-addable auxiliary switch, if any, is required to match the origi­nal motor. The switch kit choices are:
9. 220736A - one spdt switch and mounting bracket.
10. 220736B - two spdt switches and mounting bracket.
11. Specifies which accessory parts or devices, if any, are required to complete the replacement. Items include Weatherproofing Kits, Minimum Position Potentiometers, and linkages. Check the original application to ensure that you account for all modifications of the original motor.
12. Specified stroke setting of the Modutrol IV TRADELINE Motor. 12 of the 14 TRADELINE models have adjustable stroke. The remaining two (M6285A) are fixed stroke. “ADJ” listed here indicates the original motor also had adjustable stroke. Check the application to duplicate the original stroke requirements.
13. Lists the voltage of the original motor.
14. Lists the torque rating of the original motor.
15. Lists the full stroke rotation of the original motor (closed to open) in angular degrees. Two values with a “-” indicate a range of adjustment available in the field.
16. Lists the timing of the original motor. If two or adjustable stroke is listed in column 10, the time refers to a 160 degree stroke.
17. Lists the number of auxiliary switches, if any in the original motor.
18. Lists the control signal of the motor. The listing can specify either an actual value of signal input, or a “Series” designation. Please refer to the Application Notes sec­tion in this manual.
19. Lists the functional motor replacement. In some cases, the replacement will have additional features not found in the original motor. This column may also specify “+” and an accessory. This indicates a minor addition to the functional replacement will provide the functionality required in the application.
20. Comments listed in this column provide additional information to consider when replacing the original motor. Consider differences carefully prior to motor installation.

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 2. Other Honeywell Motors to Modutrol IV Motors.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing (secon ds)** | **Aux.**  **Sw** | **Control**  **Signal** |
| M436A1009 | 120 | 20 | 75° | 30 | 1 | Series 40 | M436A1116 |  |
| M436A1017 | 120 | 20 | 75° | 30 | 1 | Series 40 | M436A1116 |  |
| M436A1025 | 240 | 20 | 75° | 30 | 1 | Series 40 | M436A1124 |  |
| M436A1033 | 240 | 20 | 75° | 30 | 1 | Series 40 | M436A1124 |  |
| M436A1041 | 120 | 20 | 75° | 30 | 1 | Series 40 | M436A1116 |  |
| M436A1058 | 240 | 20 | 75° | 30 | 1 | Series 40 | M436A1124 |  |
| M436A1066 | 240 | 20 | 75° | 50 | 1 | Series 40 | M436A1124 | M436A1124 has 30 sec timing |
| M436A1074 | 220 | 20 | 75° | 50 | 1 | Series 40 | M436A1140 | M436A1140 has 50 sec timing |
| M436A1082 | 120 | 20 | 75° | 30 | 1 | Series 40 | M436A1116 |  |
| M436A1090 | 120 | 20 | 75° | 30 | 1 | Series 40 | N/A |  |
| M436A1108 | 240 | 20 | 75° | 30 | 1 | Series 40 | M436A1124 |  |
| M436A1116 | 120 | 20 | 75° | 30 | 1 | Series 40 | N/A |  |
| M436A1124 | 240 | 20 | 75° | 30 | 1 | Series 40 | N/A |  |
| M436A1132 | 240 | 20 | 75° | 50 | 1 | Series 40 | M436A1140 | M436A1124 has 30 sec timing |
| M436A1140 | 220 | 20 | 75° | 50 | 1 | Series 40 | N/A |  |
| M436A1157 | 120 | 20 | 75° | 30 | 1 | Series 40 | M436A1116 |  |
| M436A1165 | 120 | 20 | 75° | 30 | 1 | Series 40 | M436A1090 | Ray Special |
| M436A1173 | 240 | 20 | 75° | 40 | 1 | Series 40 | M436A1124 | M436A1124 has 30 sec timing |
| M6414A1009 | 24 | 25 | 90° | 90 | 1 | spdt floating | None |  |
| M6415A1008 | 24 | 25 | 90° | 90 | 1 | spdt floating | None | Trane Special, CCW Open |
| M6415A1016 | 24 | 25 | 90° | 90 | 1 | spdt floating | N/A | CCW to Open |
| M6415B1006 | 24 | 25 | 90° | 90 |  | spdt floating | None | Trane Special, CCW Open |
| M6415B1014 | 24 | 25 | 90° | 90 |  | spdt floating | N/A | CW to Open |
| M7405A1008 | 24 | 25 | 90° | 90 |  | Digital | None |  |
| M7405A1016 | 24 | 25 | 90° | 90 |  | Digital | none |  |
| M7415A1006 | 24 | 25 | 90° | 90 |  | Thermistor | M7415A1006 |  |
| M7415A1014 | 24 | 25 | 90° | 90 |  | Thermistor | M7415A1006 | York Special |
| M7415A1022 | 24 | 25 | 90° | 90 |  | Thermistor | M7415A1006 |  |
| M7415A1048 | 24 | 25 | 90° | 90 |  | Thermistor | M7415A1006 |  |
| M7415B1004 | 24 | 25 | 90° | 90 |  | Thermistor | N/A | Opens CW, spring return CCW |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 2. Other Honeywell Motors to Modutrol IV Motors.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing (secon ds)** | **Aux.**  **Sw** | **Control**  **Signal** |
| M828A ALL | 120/240 | 25 | None | None |  | Series 80 | M836A1042 |  |
| M828B ALL | 120/240 | 25 | None | None |  | Series 80 | M836A1042 |  |
| M828C ALL | 24 | 40 | None | None |  | Series 80 | M836A1042 |  |
| M828D ALL | 24 | 40 | None | None |  | Series 80 | M836A1042 |  |
| M828X ALL | 120/208 | 25 | None | None |  | Series 80 | M836A1042 |  |
| M829A ALL | 24 | 3 | 75° | None | 1 | Series 80 | None | Rewire & replace control system with M835 |
| M833A1007 | 24 | 6 | 90° | 15M |  | Series 80 | None |  |
| M833A1015 | 24 | 6 | 90° | 15M |  | Series 80 | none |  |
| M833A1023 | 24 | 6 | 90° | 15M |  | Series 80 | None | G.E. Special, special rotation, Lennox |
| M833A1031 | 24 | 6 | 90° | 15M |  | Series 80 | None | Trane Special, special rotation |
| M835A1002 | 24 | 4 | 80° | 80 |  | Series 80 | M835A1051 |  |
| M835A1010 | 24 | 4 | 80° | 80 | 1 | Series 80 | M835A1051 | Reset heat anticipator setting |
| M835A1028 | 24 | 4 | 80° | 80 | 1 | Series 80 | M835A1051 |  |
| M835A1036 | 24 | 4 | 80° | 80 | 1 | Series 80 | M835A1051 |  |
| M835A1044 | 24 | 4 | 80° | 80 | 1 | Series 80 | M835A1051 | Reset heat anticipator setting |
| M835A1051 | 24 | 4 | 80° | 80 | 1 | Series 80 | N/A | Tradeline |
| M835A1069 | 24 | 4 | 80° | 80 | 1 | Series 80 | M835A1051 |  |
| M836A1000 | 24 | 20 | 80° | 30 | 1 | Series 80 | M836A1042 |  |
| M836A1018 | 24 | 20 | 75° | 30 | 1 | Series 80 | M836A1042 |  |
| M836A1026 | 24 | 20 | 75° | 50 | 1 | Series 80 | M836A1042 | International |
| M836A1034 | 24 | 20 | 75° | 30 | 1 | Series 80 | M836A1042 |  |
| M836A1042 | 24 | 20 | 75° | 30 | 1 | Series 80 | N/A | Tradeline |
| M836A1059 | 24 | 20 | 75° | 50 | 1 | Series 80 | M836A1042 | International |
| M836A1067 | 24 | 20 | 75° | 30 | 1 | Series 80 | M836A1042 |  |
| M836A1075 | 24 | 20 | 75° | 30 | 1 | Series 80 | M836A1042 | Coleman Special |
| M836B1009 | 24 | 15 | 75° | 25 | 1 | Series 80 | M836B1033 |  |
| M836B1017 | 24 | 15 | 75° | 25 | 1 | Series 80 | M836B1033 |  |
| M836B1025 | 24 | 15 | 75° | 25 | 1 | Series 80 | M836B1033 |  |
| M836B1033 | 24 | 15 | 75° | 25 | 1 | Series 80 | N/A | Tradeline |
| M836B1041 | 24 | 15 | 75° | 25 | 1 | Series 80 | M836B1033 | Carrier Special |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 2. Other Honeywell Motors to Modutrol IV Motors.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Original Motor Specifications** | | | | | | **Functional Replacement** | **Comments** |
| **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing (secon ds)** | **Aux.**  **Sw** | **Control**  **Signal** |
| M8405A1006 | 24 | 25 | 90° | 90 |  | spst | N/A |  |
| M8405A1014 | 24 | 25 | 90° | 90 |  | spst | M8405A1006 | York Special |
| M8405B1004 | 24 | 25 | 90° | 90 |  | spst | None | Carrier Special |
| M8414A1005 | 24 | 25 | 90° | 90 | 1 | spst | None | Non spring return |
| M8415A1004 | 24 | 25 | 90° | 90 | 1 | spst | N/A |  |
| M842A1008 | 24 | 6 | 90° | 18M |  | Series 80 | N/A |  |
| M847A1008 | 24 | 2 | 45° | 20 |  | Series 80 | M847A1080 |  |
| M847A1023 | 24 | 2 | 45° | 20 |  | Series 80 | M847A1072 |  |
| M847A1031 | 24 | 2 | 45° | 20 |  | Series 80 | M847A1080 | Canada only, with 38 in. chain linkage & extended mount bracket |
| M847A1049 | 24 | 2 | 45° | 20 |  | Series 80 | M847A1072 | Canada Special with disengaging actuator arm |
| M847A1056 | 24 | 2 | 45° | 20 |  | Series 80 | M847A1072 | Arm not mounted |
| M847A1064 | 24 | 2 | 45° | 20 |  | Series 80 | M847A1072 |  |
| M847A1072 | 24 | 2 | 45° | 20 |  | Series 80 | N/A | With disengaging actuator arm |
| M847A1080 | 24 | 2 | 45° | 20 |  | Series 80 | N/A | With 38 in. chain linkage, with extended mount bracket |
| M847A1098 | 24 | 2 | 45° | 20 |  | Series 80 | M847A1098 | Canada Special, with disengaging actuator arm, extended mounting bracket included |
| M984B1015 | 24 | 45 | 90° | 18 | 1 | 135 ohm | None | Canada Versa Drive |
| M986A1011 | 24 | 45 | 90° | 18 |  | 135 ohm | None |  |
| M986B1002 | 24 | 45 | 90° | 18 | 1 | 135 ohm | None |  |
| ML984A1030 | 24 | 160 lb | 0.75 in. | 60 |  | 135 ohm | None | Canada Special |
| ML984B1004 | 24 | 80 lb | 0.75 in. | 75 |  | 135 ohm | None | Liebert Special, no balance relay, with feedback potentiometer |

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MODUTROL IV™ MOTOR CROSS REFERENCE

MODUTROL I, II AND III MOTORS TO MODUTROL IV MOTORS

This section cross references Honeywell motors (produced from 1936 to 1991) to

Modutrol IV Motors. Please refer to the Application Notes section for specific comments.

Cross Reference Format

Information contained in individual rows refer to the motor listed in the OS # to be Replaced column unless otherwise noted in the Comments column. Following is an example of the format used in this section and explanations of each column.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model**  **Number** | **Required Transformer** | **Required**  **Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

1. Lists the original motor to be replaced.
2. Lists the Modutrol IV TRADELINE Replacement Motor. This TRADELINE motor can require configuration with the accessories listed in columns 3 through 6 and 15.
3. Specifies which internal mount transformer, if any, is required to match the original motor voltage. The transformer choices are:
4. 198162AA - 120/208/240 Vac, 50/60 Hz (multi-tap).
5. 198162EA - 120 Vac, 50/60 Hz.
6. 198162GA - 220 Vac, 50/60 Hz.
7. 198162JA - 24 Vac, 50/60 Hz (isolation).
8. Specifies which field-addable auxiliary switch, if any, is required to match the original motor. The switch kit choices are:
9. 220736A - one spdt switch and mounting bracket.
10. 220736B - two spdt switches and mounting bracket.
11. Specifies which accessory parts or devices, if any, are required to complete the replacement. Items include Weatherproofing Kits, Minimum Position Potentiometers, and linkages. Check the original application to ensure that you account for all modifications of the original motor.
12. Specified stroke setting of the Modutrol IV TRADELINE Motor. 12 of the 14 TRADELINE models have adjustable stroke. The remaining two (M6285A) are fixed stroke. “ADJ” listed here indicates the original motor also had adjustable stroke. Check the application to duplicate the original stroke requirements.
13. Lists the voltage of the original motor.
14. Lists the torque rating of the original motor.
15. Lists the full stroke rotation of the original motor (closed to open) in angular degrees. Two values with a “-” indicate a range of adjustment available in the field.
16. Lists the timing of the original motor. If two or adjustable stroke is listed in column 10, the time refers to a 160 degree stroke.
17. Lists the number of auxiliary switches, if any in the original motor.
18. Lists the control signal of the motor. The listing can specify either an actual value of signal input, or a “Series” designation. Please refer to the Application Notes section in this manual.
19. Lists the functional Modutrol IV Motor replacement. In some cases, the replace­ment will have additional features not found in the original motor. This column may also specify “+” and an accessory. This indicates a minor addition to the functional replacement will provide the functionality required in the application.
20. Comments listed in this column provide additional information to consider when replacing the original motor. Consider differences carefully prior to installation of the Modutrol IV TRADELINE Motor.

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M204A1001 | None |  |  |  |  | 24 | 37 | 180 | 15 |  | Series 20 | M6184D1001 | Unidirectional stroke; Replacement is 160°,  30 sec timing |
| M204A1019 | M6184D1035 |  |  |  | 160° | 24 | 54 | 180 | 30 |  | Series 20 | M6184D1001 | Unidirectional stroke |
| M204A1027 | None |  |  |  |  | 24 | 54 | 30 | 54 |  | Series 20 | None | Unidirectional stroke; For use with 25 Hz |
| M204A1035 | M6184D1035 |  |  |  | 160° | 24 | 108 | 180 | 60 |  | Series 20 | M6184D1035 | Unidirectional stroke; Replacement is 160° |
| M204A1043 | None |  |  |  |  | 24 | 108 | 180 | 60 |  | Series 20 | None | Unidirectional stroke; 25 Hz |
| M204A1050 | M6184D1035 |  |  |  | 160° | 24 | 108 | 180 | 240 |  | Series 20 | M6194D1017 | Unidirectional stroke; Replacement is 160°, 300 lb-in. |
| M204A1068 | M6184D1035 |  |  |  | 160° | 24 | 108 | 180 | 60 |  | Series 20 | M6184D1035 | Unidirectional stroke; Replacement is 160° |
| M204B1000 | M6184D1035 |  |  |  | 160° | 24 | 108 | 180 | 60 |  | Series 20 | M6184D1035 |  |
| M405A1004 | None |  |  |  |  | 120 | 94 | 60 | 25 |  | Series 40 | None | Special timing and stroke |
| M405A1020 | None |  |  |  |  | 240 | 94 | 60 | 25 |  | Series 40 | None |  |
| M405B1003 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 40 | M4185B1009 |  |
| M405B1011 | M8185D1006 | 50017460­  001 |  |  | 160° | 208 | 50 | 160 | 60 |  | Series 40 | M4185B1058 |  |
| M405B1029 | M8185D1006 | 50017460­  001 |  |  | 160° | 240 | 50 | 160 | 60 |  | Series 40 | M4185B1058 |  |
| M405B1037 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 40 | M4185A1001 |  |
| M405B1045 | M8185D1006 | 50017460­  001 |  |  | 160° | 220 | 50 | 160 | 60 |  | Series 40 | None |  |
| M405B1052 | M8185D1006 | 50017460­  003 |  |  | 90° | 120 | 50 | 60 | 60 |  | Series 40 | M4185B1058 | Replaced Motor is 60° Replacement is 160°, 60 sec timing |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M405B1086 | M8185D1006 | 50017460­  001 |  |  | 90° | 220 | 50 | 60 | 60 |  | Series 40 | None |  |
| M405B1094 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 40 | M4185A1001 |  |
| M405B1102 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 40 | M4185A1001 |  |
| M405C1002 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 40 | M4185A1001 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be**  **Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required**  **Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M405C1010 | M8185D1006 | 50017460­  001 |  |  | 160° | 208 | 50 | 160 | 60 |  | Series 40 | M4185B1058 |  |
| M405C1028 | M8185D1006 | 50017460­  001 |  |  | 160° | 220 | 50 | 160 | 60 |  | Series 40 | None |  |
| M405C1036 | M8185D1006 | 50017460­  003 |  |  | 90° | 120 | 50 | 90 | 30 |  | Series 40 | M4185B1058 |  |
| M405C1044 | M8185D1006 | 50017460­  001 |  |  | 90° | 208 | 50 | 90 | 30 |  | Series 40 | M4185B1058 |  |
| M405C1051 | M8185D1006 | 50017460­  001 |  |  | 90° | 240 | 50 | 90 | 30 |  | Series 40 | M4185B1058 |  |
| M405C1069 | M8185D1006 | 50017460­  001 |  |  | 160° | 240 | 50 | 160 | 60 |  | Series 40 | M4185B1058 |  |
| M405D1001 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 40 | M4185B1009 | Use aux. end; N.O. |
| M405D1019 | M8185D1006 | 50017460­  001 |  |  | 160° | 208 | 50 | 160 | 60 |  | Series 40 | None | Use aux. end; N.O. |
| M405D1027 | M8185D1006 | 50017460­  001 |  |  | 160° | 240 | 50 | 160 | 60 |  | Series 40 | None |  |
| M405D1035 | M8185D1006 | 50017460­  001 |  |  | 160° | 220 | 27 | 160 | 60 |  | Series 40 | None |  |
| M445A1000 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 40 | M4185B1009 |  |
| M445A1018 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 40 | M4185B1009 |  |
| M445A1026 | M8185D1006 | 50017460­  001 | 220736A |  | 160° | 208 | 50 | 160 | 60 | 1 | Series 40 | M4185B1058 |  |
| M445A1034 | M8185D1006 | 50017460­  001 | 220736A |  | 160° | 208 | 50 | 160 | 60 | 1 | Series 40 | M4185B1058 |  |
| M445A1042 | M8185D1006 | 50017460­  001 | 220736A |  | 160° | 208/240 | 50 | 160 | 60 | 1 | Series 40 | M4185B1058 |  |
| M445A1059 | M8185D1006 | 50017460­  001 | 220736A |  | 160° | 240 | 50 | 160 | 60 | 1 | Series 40 | M4185B1058 |  |
| M445A1067 | M8185D1006 | 50017460­  001 | 220736A |  | 160° | 220 | 50 | 160 | 60 | 1 | Series 40 | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M445A1075 | M8185D1006 | 50017460­  003 | 220736A |  | 90° | 120 | 50 | 60 | 25 | 1 | Series 40 | M4185B1058 | 30 sec timing & 90° stroke |
| M445A1091 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 40 | M4185B1009 |  |
| M445A1109 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 40 | M4185B1009 |  |
| M445A1117 | M8185D1006 | 50017460­  003 | 220736A |  | 90° | 120 | 50 | 90 | 30 | 1 | Series 40 | M4185B1058 |  |
| M445A1125 | M8185D1006 | 50017460­  003 | 220736A |  | 90° | 120 | 50 | 90 | 15 | 1 | Series 40 | M4185B1058 |  |
| M445A4004 | M8185D1006 | 50017460­  003 | 220736A |  | ADJ | 120 | 50 | 90/160 | 30/60 | 1 | Series 40 | None | Canada Special, aux. switch set at 120° |
| M445C1008 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 40 | M4185B1009 |  |
| M445C1016 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 40 | M4185B1009 | Aux. switch set at 155° |
| M445C1024 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 40 | M4185B1009 |  |
| M445D1007 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 40 | M4185A1001 |  |
| M445D1015 | M8185D1006 | 50017460­  003 |  |  | 90° | 120 | 50 | 90 | 30 |  | Series 40 | M4185B1058 |  |
| M445D1023 | M8185D1006 | 50017460­  001 |  |  | 160° | 220 | 50 | 160 | 60 |  | Series 40 | None |  |
| M445D1031 | M8185D1006 | 50017460­  001 |  |  | 160° | 240 | 50 | 160 | 60 |  | Series 40 | M4185B1058 |  |
| M445D1049 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 180 | 67 |  | Series 40 | M4185A1001 | 60 sec timing & 160° stroke |
| M445D1056 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 40 | M4185A1001 | M445D was moisture fungus treated |
| M465A1008 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 25 | 160 | 40 |  | Series 40 | M4185B1009 | 60 sec timing |
| M465B1007 | M8185D1006 | 50017460­  003 | 220736B |  | 160° | 120 | 50 | 160 | 60 | 2 | Series 40 | M4185A1001 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be**  **Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required**  **Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M604A1002 | M6184D1035 | 50017460­  003 |  |  |  | 120 | 75 | 360 | 30 |  | Series 61 | M6184A1023 | TRADELINE is 90°/160° |
| M604A1028 | M6184D1035 | 50017460­  001 |  |  |  | 240 | 40 | 360 | 60 |  | Series 61 | None | TRADELINE is 90°/160° |
| M604A1036 | M6184D1035 | 50017460­  001 |  |  |  | 208 | 54 | 360 | 30 |  | Series 61 | None |  |
| M604A1051 | None |  |  |  |  | 240 | 40 | 180 | 15 |  | Series 61 | None | Special shaft length |
| M604A1069 | M6184D1035 | 50017460­  003 |  |  |  | 120 | 40 | 360 | 60 |  | Series 61 | None | Bahnson Special; TRADELINE is 90°/160° |
| M604A1077 | M6184D1035 | 50017460­  003 |  |  |  | 120 | 75 | 360 | 15 |  | Series 61 | None | TRADELINE is 90°/160° |
| M604B1001 | M6184D1035 | 50017460­  003 |  |  | 160° | 120 | 37 | 180 | 15 |  | Series 61 | M6184A1023 | Change control circuit to 24 Vac |
| M604B1019 | M6184D1035 | 50017460­  001 |  |  | 160° | 240 | 37 | 180 | 30 |  | Series 61 | None |  |
| M604B1027 | M6184D1035 | 50017460­  003 |  |  | 160° | 120 | 75 | 180 | 30 |  | Series 61 | M6184A1023 |  |
| M604B1035 | M6184D1035 | 50017460­  001 |  |  | 160° | 208 | 54 | 180 | 30 |  | Series 61 | None |  |
| M604B1043 | M6184D1035 | 50017460­  001 |  |  | 160° | 240 | 75 | 180 | 30 |  | Series 61 | None |  |
| M604B1050 | None |  |  |  |  | 120 | 54 | 180 | 30 |  | Series 61 | None | Designed for use with 25 Hz |
| M604B1068 | M6184D1035 | 50017460­  003 |  |  | 160° | 120 | 54 | 180 | 30 |  | Series 61 | M6184A1023 | Change control circuit to 24 Vac |
| M604B1076 | M6184D1035 | 50017460­  001 |  |  | 160° | 220 | 54 | 180 | 30 |  | Series 61 | None |  |
| M604C1059 | None |  |  |  |  | 24 | 108 | 160 | 60 |  | Series 61 | None | Micronik System |
| M604C1083 | None |  |  |  |  | 24 | 150 | 160 | 120 |  | Series 61 | None |  |
| M604D1009 | M6184D1035 | 50017460­  001 |  |  | 160° | 220 | 85 | 180 | 60 |  | Series 61 | None |  |
| M604D1017 | M6184D1035 | 50017460­  001 |  |  | 160° | 220 | 85 | 180 | 60 |  | Series 61 | None |  |
| M604E1008 | M6184D1035 |  | 220736A |  | ADJ | 24 | 150 | 90/160 | 30/60 | 1 | Series 61 | M6184F1014 | Replacement is 90°/160° stroke |
| M604E1016 | M6184D1035 |  | 220736A |  | ADJ | 24 | 150 | 90/160 | 30/60 | 1 | Series 61 | M6184F1014 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M604E1024 | M6184D1035 |  | 220736A |  | ADJ | 24 | 150 | 90/160 | 30/60 | 1 | Series 61 | M6184F1014 |  |
| M634A1009 | M6184D1035 |  |  |  | 160° | 24 | 35 | 160 | 60 |  | Series 61 | M6184D1035 | Replacement is150 lb-in. torque |
| M634B1008 | M6184D1035 | 50017460­  003 |  |  | 160° | 120 | 35 | 160 | 60 |  | Series 61 | None | Change control circuit to 24 Vac |
| M634B1016 | M6184D1035 | 50017460­  001 |  |  | 160° | 240 | 35 | 160 | 60 |  | Series 61 | None |  |
| M634C1007 | M6184D1035 |  | 220736B |  | 160° | 24 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 | Check torque |
| M634C1015 | M6184D1035 | 50017460­  003 | 220736B |  | 160° | 120 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 | 150 lb-in. torque; Replacement: requires 50017460-001 |
| M634C1023 | M6184D1035 | 50017460­  001 | 220736B |  | 160° | 240 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 |  |
| M634C1031 | M6184D1035 | 50017460­  001 | 220736B |  | 160° | 220 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 | 150 lb-in. torque; Replacement: requires 50017460-001 |
| M634C1049 | M6184D1035 | 50017460­  003 | 220736B |  | 160° | 120 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 | 150 lb-in. torque; Replacement: requires 50017460-003 |
| M634C1056 | M6184D1035 |  | 220736B |  | 160° | 24 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 | Check torque |
| M634C1064 | M6184D1035 | 50017460­  001 | 220736B |  | 160° | 220 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 | 150 lb-in. torque; Replacement: requires  50017460-001 |
| M634C1072 | M6184D1035 | 50017460­  003 | 220736B |  | 160° | 120 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 | 150 lb-in. torque; Replacement: requires  50017460-003 |
| M634C1080 | M6184D1035 | 50017460­  001 | 220736B |  | 160° | 220 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 | 150 lb-in. torque; Replacement: requires  50017460-001 |
| M634C1098 | M6184D1035 | 50017460­  001 | 220736B |  | 160° | 220 | 35 | 160 | 60 | 2 | Series 61 | M6184F1014 |  |
| M644A1008 | M6184D1035 |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 61 | M6184D1035 |  |
| M644A1016 | M6184D1035 |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 61 | M6184D1035 |  |
| M644A1024 | M6184D1035 |  |  |  | 90° | 24 | 150 | 90 | 30 |  | Series 61 | M6184A1015 |  |
| M644A1032 | None |  |  |  |  | 24 | 37 | 160 | 15 |  | Series 61 | None |  |
| M644A1107 | None |  |  |  |  | 24 | 37 | 335 | 15 |  | Series 61 | None |  |
| M644A1115 | None |  |  |  |  | 24 | 37 | 335 | 30 |  | Series 61 | None |  |
| M644A1149 | M6184D1035 | 50017460­  001 |  |  | 160° | 220 | 150 | 160 | 60 |  | Series 61 | None |  |
| M644A1180 | M6184D1035 |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 61 | M6184D1035 | Carrier Special |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be**  **Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required**  **Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M644B1007 | M6184D1035 | 50017460­  003 |  |  | 160° | 120 | 75 | 160 | 30 |  | Series 61 | None | Change control circuit to 24 Vac |
| M644B1015 | None |  |  |  |  | 120 | 37 | 160 | 15 |  | Series 61 | None |  |
| M644B1031 | M6184D1035 | 50017460­  003 |  |  | 90° | 120 | 150 | 90 | 120 |  | Series 61 | None | Change control circuit to 24 Vac |
| M644B1049 | M6184D1035 | 50017460­  003 |  |  | 160° | 120 | 75 | 160 | 30 |  | Series 61 | M6184A1023 | TRADELINE is 30/60 sec timing; Replacement is 150 lb-in. |
| M644B1056 | M6194D1017 | 50017460­  003 |  |  | 90° | 120 | 150 | 90 | 120 |  | Series 61 | None |  |
| M644C1006 | M6184D1035 |  |  |  | ADJ | 24 | 75 | 90/160 | 15/30 |  | Series 61 | M6184D1001 | TRADELINE is 30/60 sec timing |
| M644C1014 | M6194D1017 |  |  |  | ADJ | 24 | 150 | 90/160 | 120/  240 |  | Series 61 | M6194D1017 |  |
| M644C1022 | M6184D1035 | 50017460­  003 |  |  | ADJ | 120 | 150 | 90/160 | 120/  240 |  | Series 61 | None |  |
| M644C1030 | M6194D1017 |  |  |  | ADJ | 24 | 150 | 90/160 | 120/  240 |  | Series 61 | M6194D1017 |  |
| M644C1055 | M6194D1017 |  |  |  | ADJ | 24 | 300 | 90/160 | 120/  240 |  | Series 61 | M6194D1017 | Lennox Special |
| M644C1063 | M6184D1035 | 50017460­  003 |  |  | ADJ | 120 | 150 | 90/160 | 120/  240 |  | Series 61 | None |  |
| M644C1071 | M6194D1017 |  |  |  | ADJ | 24 | 300 | 90/160 | 120/  240 |  | Series 61 | None | York Special |
| M644C4000 | M6194D1017 |  |  |  | ADJ | 24 | 150 | 90/160 | 120/  240 |  | Series 61 | M6194D1017 | Canada Special |
| M644D1005 | M6184D1035 |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | Series 61 | M6184F1014 |  |
| M644D1013 | M6184D1035 |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | Series 61 | M6184F1014 |  |
| M644D1021 | M6184D1035 |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | Series 61 | M6184F1014 |  |
| M644D1039 | M6184D1035 |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | Series 61 | M6184F1014 |  |
| M644D1047 | M6194D1017 |  | 220736B |  | ADJ | 24 | 300 | 90/160 | 120/  240 | 2 | Series 61 | None | Lennox Special |
| M644E1004 | M6184D1035 |  | 220736A |  | ADJ | 24 | 150 | 90/160 | 30/60 | 1 | Series 61 | M6184F1014 | Aux. switch set at 4° |
| M644E1012 | M6194D1017 |  | 220736A |  | 90° | 24 | 150 | 90 | 60 | 1 | Series 61 | M6194B1011 | TRADELINE: 30/60 sec timing |
| M644E1020 | M6184D1035 | 50017460­  003 | 220736A |  | ADJ | 120 | 75 | 90/160 | 15/30 | 1 | Series 61 | None | Aux. switch set at 4° |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M644E1038 | M6184D1035 |  | 220736A |  | ADJ | 24 | 75 | 90/160 | 15/30 | 1 | Series 61 | M6184D1001 | Requires Q607A1050; Set aux. switch at 40° |
| M644E1053 | M6194D1017 |  | 220736A |  | ADJ | 24 | 300 | 90/160 | 120/  240 | 1 | Series 61 | M6194E1006 |  |
| M644F1003 | M6184D1035 | 50017460­  003 |  |  | 160° | 120 | 75 | 180 | 30 |  | Series 61 | M6184D1001 | Trane Special; Requires 50017460-001 &  24 Vac control circuit |
| M644L1006 | M6194D1017 | 50017460­  003 | 220736A |  | 90° | 120 | 150 | 90 | 120 | 1 | Series 61 | None |  |
| M644L1014 | M6184D1035 | 50017460­  003 | 220736A |  | 90° | 120 | 150 | 90 | 30 | 1 | Series 61 | M6184F1014 | Requires 50017460-001 |
| M644L1022 | M6194D1017 | 50017460­  003 | 220736A |  | 90° | 120 | 150 | 90 | 120 | 1 | Series 61 | None |  |
| M644L1030 | M6194D1017 | 50017460­  003 | 220736A |  | 90° | 120 | 150 | 90 | 120 | 1 | Series 61 | None | Trane Special, aux. switch set at 7° |
| M734A1007 | None |  |  |  |  | 120 | 35 | 90 | 30 |  | W936 | None | Special circuit |
| M734A1015 | None |  |  |  |  | 120 | 35 | 90 | 30 |  | W936 | None |  |
| M734A1023 | None |  |  |  |  | 120 | 35 | 90 | 30 |  | W936 | None | Nesbitt Special; Special circuit |
| M734B1006 | None |  |  |  |  | 120 | 35 | 90 | 28 |  | W936 | None | Special circuit; Check transformer |
| M734B1014 | None |  |  |  |  | 240 | 35 | 90 | 28 |  | W936 | None |  |
| M734B1022 | None |  |  |  |  | 24 | 35 | 90 | 28 |  | W936 | None | Nesbitt Special; Special circuit |
| M734B1030 | None |  |  |  |  | 240 | 35 | 160 | 50 |  | W936 | None | Special circuit  Check transformer |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M734B1048 | None |  |  |  |  | 120 | 35 | 160 | 50 |  | W936 | None |  |
| M734C1005 | None |  |  |  |  | 120 | 35 | 90 | 28 |  | W936 | None | Special circuit |
| M734C1013 | None |  |  |  |  | 120 | 35 | 90 | 28 |  | W936 | None | Nesbitt Special; Special circuit |
| M734C1021 | None |  |  |  |  | 120 | 35 | 90 | 28 |  | W936 | None |  |
| M734D1004 | M9164D1009 | 50017460­  003 |  | Q7330A1004 | 160° | 120 | 35 | 160 | 50 |  | W936 | None |  |
| M734D1012 | M9164D1009 | 50017460­  003 |  | Q7330A1004 | 90° | 120 | 35 | 90 | 28 |  | W936 | None |  |
| M734D1020 | M9164D1009 | 50017460­  001 |  | Q7330A1004 | 160° | 240 | 35 | 160 | 50 |  | W936 | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M734D1038 | M9164D1009 |  |  | Q7330A1004 | 160° | 24 | 35 | 160 | 50 |  | W936 | None |  |
| M734D1046 | M9164D1009 |  | 220736A | Q7330A1004 | 90° | 24 | 35 | 90 | 28 | 1 | W936 | None |  |
| M734D1053 | M9164D1009 |  | 220736A | Q7330A1004 | 160° | 24 | 35 | 160 | 50 | 1 | W936 | None |  |
| M734E ALL | M9164D1009 |  |  | Q7330A1004 |  |  | 35 |  |  |  | W936 | None | Use aux end of N.C. motor; N.O. |
| M734F ALL | M9164D1009 |  |  | Q7330A1004 |  |  | 75 |  |  |  | W936 | None |  |
| M734G ALL | M9164D1009 |  |  | Q7330A1004 |  |  | 75 |  |  |  | W936 | None |  |
| M734H1000 | M9164D1009 | 50017460­  003 |  | Q7130A1006 | 90° | 120 | 35 | 90 | 28 |  | 10.5-13.5  Vdc | M7164G1030 | Adjust for 10.5-13.5 Vdc, select CCW rotation; Elec. N.O. |
| M734H1018 | M9164D1009 | 50017460­  003 |  | Q7130A1006 | 90° | 120 | 35 | 90 | 28 |  | 4 - 7 Vdc | None | Adjust for 4-7 Vdc, Select CCW; Electrically N.O. |
| M734H1026 | M9164D1009 |  |  | Q7130A1006 | 160° | 24 | 35 | 160 | 50 |  | 4 - 7 Vdc | None |  |
| M734H1034 | M9164D1009 |  |  | Q7130A1006 | 90° | 24 | 35 | 90 | 30 |  | 10.5-13.5  Vdc | M7164G1030 | Adjust for 10.5-13.5 Vdc, select CCW rotation; Elec. N.O. |
| M734J1007 | M9164D1009 | 50017460­  003 |  | Q7130A1006 | 160° | 120 | 35 | 160 | 50 |  | 6 - 9 Vdc | None | Adjust for 6-9 Vdc |
| M734J1015 | M9164D1009 |  |  | Q7130A1006 | 160° | 24 | 35 | 160 | 50 |  | 4 - 7 Vdc | None | Adjust for 4-7 Vdc |
| M734J1023 | M9164D1009 |  |  | Q7130A1006 | 90° | 24 | 35 | 90 | 30 |  | 10.5-13.5  Vdc | M7164A1017 | Lennox Special; Adjust for 10.5-13.5 Vdc |
| M734J1031 | M9164D1009 | 50017460­  003 |  | Q7130A1006 | 90° | 120 | 35 | 90 | 30 |  | 10.5-13.5  Vdc | None | York Special; Adjust for 10.5-13.5 Vdc |
| M734J1049 | M9164D1009 |  |  | Q7130A1006 | 160° | 24 | 35 | 160 | 50 |  | 10.5-13.5  Vdc | None | Lennox Special; Adjust for 10.5-13.5 Vdc |
| M734J1056 | M9164D1009 |  |  | Q7130A1006 | 90° | 24 | 35 | 90 | 30 |  | 10.5-13.5  Vdc | M7164A1017 | Adjust for 10.5-13.5 Vdc |
| M734J1064 | M9164D1009 | 50017460­  003 |  | Q7130A1006 | 90° | 120 | 35 | 90 | 30 |  | 6 - 9 Vdc | None | Adjust for 6-9 Vdc |
| M734J1072 | M9164D1009 | 50017460­  003 | 220736A | Q7130A1006 | 160° | 120 | 35 | 160 | 50 | 1 | 4 - 7 Vdc | None | Adjust for 4-7 Vdc |
| M734K1006 | None |  |  |  |  | 120 | 35 | 160 | 50 |  | 4 - 7 Vdc, 3W, 11 Vdc out | None | 3 wire output Micronik system |
| M734K1014 | None |  |  |  |  | 24 | 35 | 160 | 50 |  |  |  |  |
| M741B1001 | None |  |  |  |  | 24 | 150 | 90 | 30 |  | BRCS | None | Cleaver Brooks BRCS |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M741B1019 | None |  |  |  |  | 24 | 150 | 90 | 30 |  | BRCS | M7484A1010 | BRCS |
| M744A1006 | M9184D1021 |  |  | Q7330A1004 | 160° | 24 | 150 | 160 | 60 |  | W936 | None |  |
| M744A1014 | M9184D1021 |  |  | Q7330A1004 | 90° | 24 | 150 | 90 | 30 |  | W936 | None |  |
| M744A1022 | M9184D1021 | 50017460­  003 |  | Q7330A1004 | 90° | 120 | 150 | 90 | 30 |  | W936 | None | Westinghouse Special |
| M744B ALL | None |  |  |  |  | 24 | 150 |  |  |  | W936 | None |  |
| M744D1003 | M9184D1021 |  |  | Q7130A1006 | 160° | 24 | 150 | 160 | 60 |  | 4 - 7 Vdc | None | Adjust for 4-7 Vdc  For use with W7080 systems |
| M744D1011 | M9184D1021 |  |  | Q7130A1006 | 160° | 24 | 150 | 160 | 60 |  | 4 - 7 Vdc | None |  |
| M744D1029 | None |  |  |  |  | 24 | 150 | 90 | 30 |  | 0.8 - 3.3 Vdc | None |  |
| M744D1037 | None |  |  |  |  | 24 | 150 | 90 | 120 |  | 0.8 - 3.3 Vdc | None | Despatch Industries |
| M744D1045 | None |  |  |  |  | 120 | 150 | 90 | 30 |  | 0.8 - 3.3 Vdc | None |  |
| M744E1002 | None |  |  |  |  | 24 | 50 | 160 | 60 |  | 2 - 10 Vdc | None | Micronik, with external overdrive |
| M744F1001 | M9184D1021 |  |  | Q7330A1004 | 160° | 24 | 150 | 160 | 60 |  | W936 | None | Includes internal heater |
| M744G1000 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | 4 - 7 Vdc, 3W, 11 Vdc out | None | 3 wire output |
| M744J1006 | None |  |  |  |  | 24 | 150 | 90 | 30 |  | 0 - 2.5 Vdc | None | With zero adjustment |
| M744S1005 | M9184D1021 | 50017460­  003 |  | Q7230A1005 | 90° | 120 | 150 | 90 | 30 |  | 4 - 20 mA | M7284A1004 | Adjust for 4-20 mA Micronik system |
| M744S1013 | M9184D1021 | 50017460­  003 |  | Q7230A1005 | 160° | 120 | 150 | 160 | 60 |  | 4 - 20 mA | M7284A1012 |  |
| M744T1004 | M9184D1021 | 50017460­  003 | 220736B | Q7230A1005 | 90° | 120 | 150 | 90 | 30 | 2 | 4 - 20 mA | M7284C1000 |  |
| M744T1012 | M9184D1021 | 50017460­  003 | 220736B | Q7230A1005 | 160° | 120 | 150 | 160 | 60 | 2 | 4 - 20 mA | M7284C1000 |  |
| M744Y1009 | M9184D1021 | 50017460­  003 | 220736B | Q7230A1005 | 90° | 120 | 150 | 90 | 30 | 2 | 4 - 20 mA | M7284Q1009 | Adjust for desired range  Adjustable zero span |
| M744Y1017 | M9184D1021 | 50017460­  003 | 220736B | Q7230A1005 | 160° | 120 | 150 | 160 | 60 | 2 | 4 - 20 mA | M7284Q1009 |  |
| M745A1003 | M9185D1004 |  |  | Q7330A1004 | 90° | 24 | 50 | 90 | 30 |  | W936 | None |  |
| M745A1011 | M9185D1004 |  |  | Q7330A1004 | 160° | 24 | 50 | 160 | 60 |  | W936 | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M745A1029 | M9185D1004 | 50017460­  003 |  | Q7330A1004 | 160° | 120 | 50 | 160 | 60 |  | W936 | None |  |
| M745B1002 | M9185D1004 |  |  | Q7330A1004 | 160° | 24 | 50 | 160 | 60 |  | W936 | None | Use aux end of N.C. motor; N.O. mech. and elec. |
| M745C1001 | M9185D1004 |  |  | Q7330A1004 | 160° | 24 | 50 | 160 | 60 |  | W936 | None | Used with W936 & W945 systems |
| M745D ALL | None |  |  |  |  | 24 | 50 | 160 | 60 |  |  | None | N.O. |
| M745E1009 | None |  |  |  |  | 24 | 50 | 160 | 60 |  | W936 | M9185D1004  +Q7330A1006 | N.O. mechanically, N.C. electrically |
| M745F1008 | None |  |  |  |  | 24 | 50 | 160 | 60 |  |  | None | N.C. mechanically, N.O. electrically |
| M745G1007 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 50 | 160 | 60 |  | 4 - 7 Vdc | M9185D1004 +  Q7130A1006 | Adjust for 4-7 Vdc, Select CCW, use aux shaft; N.O. mech. and elec. |
| M745H1006 | M9185D1004 |  |  | Q7630A1001 | 160° | 24 | 50 | 160 | 60 |  | 14 - 17 Vdc | None |  |
| M745J1003 | None |  |  |  |  | 24 | 50 | 160 | 60 |  | 4 - 7 Vdc, 3W, 11 Vdc out | None | 3 wire output, Micronik System, electrically N.O. |
| M745K1002 | M9185D1004 |  |  | Q7630A1001 | 90° | 24 | 50 | 90 | 35 |  | 14 - 17 Vdc | None | Lennox Special, select CCW rotation, electrically N.O. |
| M745L1001 | M9185D1004 |  |  | Q7630A1001 | 90° | 24 | 50 | 90 | 35 |  | 14 - 17 Vdc | None | Lennox Special |
| M745L1019 | M9185D1004 | 50017460­  003 |  | Q7630A1001 | 160° | 120 | 50 | 160 | 60 |  | 14 - 17 Vdc | None | York Special |
| M745L1027 | M9185D1004 |  |  | Q7630A1001 | 160° | 24 | 50 | 160 | 60 |  | 14 - 17 Vdc | None |  |
| M745L1035 | M9185D1004 |  |  | Q7630A1001 | 90° | 24 | 50 | 90 | 35 |  | 14 - 17 Vdc | None | Lennox Special |
| M745L1043 | M9185D1004 |  |  | Q7630A1001 | 90° | 24 | 50 | 90 | 35 |  | 14 - 17 Vdc | None |  |
| M745M1000 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 50 | 160 | 60 |  | 6 - 9 Vdc | None | Adjust for 6-9 Vdc, use aux. end; Mechanically N.O. |
| M745M1018 | M9185D1004 |  |  | Q7130A1006 | 90° | 24 | 50 | 90 | 35 |  | 10.5-13.5  Vdc | None | Lennox Special; Adjust for 10.5-13.5 Vdc, use aux. end |
| M745M1026 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 50 | 160 | 60 |  | 4 - 7 Vdc | None | Adjust for 4-7 Vdc, use aux. end;  Mechanically N.O. |
| M745M1034 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 50 | 160 | 60 |  | 4 - 7 Vdc | None | Lennox Special, Adjust for 4-7 Vdc, use aux. end, mech. N.O. |
| M745M1042 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 50 | 160 | 60 |  | 4 - 7 Vdc | None | Adjust for 4-7 Vdc, use aux. end;  Mechanically N.O. |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M745N1009 | M9185D1004 |  |  | Q7130A1006 | 90° | 24 | 50 | 90 | 35 |  | 10.5-13.5  Vdc | None | Lennox Special; Adjust for 10.5-13.5 Vdc, select CCW rotation |
| M745N1017 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 50 | 160 | 60 |  | 10.5-13.5  Vdc | None | Mammoth Special, Adjust for 10.5-13.5 Vdc, select CCW rotation; elect. N.O. |
| M745N1025 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 50 | 160 | 60 |  | 6 - 9 Vdc | None | Adjust for 4-7 Vdc, Select CCW; Electrically N.O. |
| M745P1007 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 50 | 160 | 60 |  | 4 - 7 Vdc | M9185D1004 +  Q7130A1006 | Adjust for 4-7 Vdc |
| M745P1015 | M9185D1004 |  |  | Q7130A1006 | 90° | 24 | 50 | 90 | 35 |  | 10.5-13.5  Vdc | None | Lennox Special; Adjust for 10.5-13.5 Vdc |
| M745Q1006 | None |  |  |  |  | 24 | 50 | 90 | 35 |  |  | None |  |
| M745S1002 | M9185D1004 | 50017460­  003 |  | Q7230A1005 | 90° | 120 | 50 | 90 | 30 |  | 4 - 20 mA | M7285A1003 | Adjust for 4-20 mA |
| M745S1010 | M9185D1004 | 50017460­  003 |  | Q7230A1005 | 160° | 120 | 50 | 160 | 60 |  | 4 - 20 mA | M7285A1003 |  |
| M745T1001 | M9185D1004 | 50017460­  003 | 220736B | Q7230A1005 | 90° | 120 | 50 | 90 | 30 | 2 | 4 - 20 mA | M7285C1009 |  |
| M745T1019 | M9185D1004 | 50017460­  003 | 220736B | Q7230A1005 | 160° | 120 | 50 | 160 | 60 | 2 | 4 - 20 mA | M7285C1009 |  |
| M745Y1006 | M9185D1004 | 50017460­  003 | 220736B | Q7230A1005 | 90° | 120 | 50 | 90 | 30 | 2 | 4 - 20 mA | M7285Q1008 | Adjustable zero span, Adjust for desired range |
| M745Y1014 | M9185D1004 | 50017460­  003 | 220736B | Q7230A1005 | 160° | 120 | 50 | 160 | 60 | 2 | 4 - 20 mA | M7285Q1008 |  |
| M765A1001 | M9185D1004 |  |  | Q7330A1004 | 160° | 24 | 25 | 160 | 40 |  | W936 | None |  |
| M765A1019 | M9185D1004 |  |  | Q7330A1004 | 90° | 24 | 25 | 90 | 25 |  | W936 | None |  |
| M765K1000 | M9185D1004 |  |  | Q7630A1001 | 90° | 24 | 25 | 90 | 25 |  | 14 - 17 Vdc | None | Select CCW rotation; Use with W7080 system, elec. N.O. |
| M765L1009 | M9185D1004 |  |  | Q7630A1001 | 160° | 24 | 25 | 160 | 40 |  | 14 - 17 Vdc | None | For use with W7080 system |
| M765L1017 | M9185D1004 |  |  | Q7630A1001 | 90° | 24 | 25 | 90 | 25 |  | 14 - 17 Vdc | None |  |
| M765L1025 | M9185D1004 | 50017460­  003 |  | Q7630A1001 | 90° | 120 | 25 | 90 | 25 |  | 14 - 17 Vdc | None | Trane Special; use with W7080 system |
| M765N1007 | M9185D1004 |  |  | Q7130A1006 | 90° | 24 | 25 | 90 | 25 |  | 10.5-13.5  Vdc | None | Lennox Special; Adjust for 10.5-13.5 Vdc, select CCW rotation, elect. N.O. |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M765N1015 | M9185D1004 |  |  | Q7130A1006 | 160° | 24 | 25 | 160 | 40 |  | 10.5-13.5  Vdc | None |  |
| M765P1005 | None |  |  |  |  | 24 | 25 | 90 | 25 |  | 3.5 - 6.5 Vdc | None | McDonald's Special; 3 wire output |
| M765P1013 | None |  |  |  |  | 24 | 25 | 90 | 25 |  | 3.5 - 6.5 Vdc | None | York Special; 3 wire output |
| M765Q1004 | None |  |  |  |  | 24 | 25 | 90 | 25 |  | 0 - 1 mA | None | Nesbitt Special |
| M805B1004 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 80 | M8185D1006 |  |
| M805B1012 | None |  |  |  |  | 24 | 27 | 160 | 120 |  | Series 80 | None | Designed for use with 25 hz |
| M805B1020 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 80 | M8185D1006 |  |
| M805B1038 | M8185D1006 |  | 220736A |  | 160° | 24 | 50 | 160 | 60 | 1 | Series 80 | None |  |
| M805C1003 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 80 | M8185D1006 |  |
| M805D1002 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 80 | M4185B1009 | Use aux. motor end; N.O. |
| M845A1001 | M8185D1006 |  | 220736A |  | 160° | 24 | 50 | 160 | 60 | 1 | Series 80 | None |  |
| M845A1027 | M8185D1006 | 50017460­  001 | 220736A |  | 160° | MULTI | 50 | 160 | 60 | 1 | Series 80 | M4185B1058 |  |
| M845A1035 | M8185D1006 | 50017460­  001 | 220736A |  | 90° | MULTI | 50 | 90 | 30 | 1 | Series 80 | M4185B1058 | Requires 50017460-001 |
| M845A1050 | None |  |  |  |  | 24 | 50 | 160 | 60 | 1 | Series 80 | None |  |
| M845A1068 | None |  |  |  |  | 24 | 50 | 160 | 60 | 1 | Series 80 | None |  |
| M845A4005 | M8185D1006 | 50017460­  001 | 220736A |  | ADJ | MULTI | 50 | 90/160 | 30/60 | 1 | Series 80 | None | Canada Special, Aux. switch set at 120° |
| M845B1000 | M8185D1006 |  | 220736A |  | 160° | 24 | 50 | 160 | 60 | 1 | Series 80 | None |  |
| M845B1018 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 80 | M4185B1058 |  |
| M845B1026 | M8185D1006 | 50017460­  001 | 220736A |  | 160° | 220 | 50 | 160 | 60 | 1 | Series 80 | None |  |
| M845C1009 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 80 | M8185D1006 |  |
| M845D1008 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 80 | None | Univac Special |
| M845D1016 | M8185D1006 | 50017460­  003 |  |  | 160° | 120 | 50 | 160 | 60 |  | Series 80 | M4185B1058 | G.E. Special |
| M845D1024 | M8185D1006 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 80 | None | Braden Special |
| M845E1007 | M8185D1006 | 50017460­  003 | 220736A |  | 160° | 120 | 50 | 160 | 60 | 1 | Series 80 | M4185B1009 | Use aux. motor end; N.O. |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M845E4001 | M8185D1006 | 50017460­  003 | 220736A |  | ADJ | 24/120 | 50 | 90/160 | 30/60 | 1 | Series 80 | M4185B1009 | Canada Special; Use aux. motor end |
| M865A1009 | M8185D1006 |  |  |  | 160° | 24 | 25 | 160 | 40 |  | Series 80 | None |  |
| M865B1008 | M8185D1006 |  | 220736A |  | 160° | 24 | 25 | 160 | 40 | 1 | Series 80 | None |  |
| M904A1006 | M9184D1021 |  |  |  | 160° | 24 | 108 | 160 | 60 |  | 135 ohm | M9184A1019 |  |
| M904E1002 | M9184D1021 |  |  |  | 160° | 24 | 108 | 160 | 60 |  | 135 ohm | M9184A1019 |  |
| M904E1010 | None |  |  |  |  | 24 | 108 | 160 | 60 |  | 135 ohm | None | 25 Hz |
| M904E1028 | None |  |  |  |  | 24 | 108 | 160 | 60 |  | 135 ohm | None | 40 Hz |
| M904E1036 | M9184D1021 |  |  | Q181A1004 | 160° | 24 | 108 | 180 | 60 |  | 135 ohm | M9184A1019 | Add Q181 for slaved motor applications |
| M904E1051 | M9184D1021 |  |  |  | 90 | 24 | 108 | 90 | 30 |  | 135 ohm | None |  |
| M904E1085 | M9184D1021 |  |  |  | 90 | 24 | 108 | 90 | 30 |  | 135 ohm | None | Special cam for few positions |
| M904E1119 | M9194D1003 |  |  |  | 160 | 24 | 108 | 240 | 90 |  | 135 ohm | None | TRADELINE is 90/160 degrees |
| M904E1150 | M9184D1021 |  |  | Q181A1004 | 160° | 24 | 108 | 160 | 240 |  | 135 ohm | M9194D1003 | Add Q181 for slaved motor applications |
| M904E1176 | M9184D1021 |  |  | Q181A1004 | 160° | 24 | 108 | 180 | 240 |  | 135 ohm | M9194D1003 |  |
| M904E1218 | None |  |  |  |  | 24 | 108 | 160 | 240 |  | 135 ohm | None |  |
| M904E1226 | None |  |  |  |  | 24 | 14 | 160 | 7.5 |  | 135 ohm | None | Ariel Davis Mfg., special cam |
| M904E1234 | None |  |  |  |  | 24 | 38 | 180 | 15 |  | 135 ohm | None | Special timing; For 30 sec 160° motor, Select M9184D1021 |
| M904E1242 | None |  |  |  |  | 24 | 38 | 180 | 15 |  | 135 ohm | None |  |
| M904E1267 | M9184D1021 |  |  | Q181A1004 | 160° | 24 | 54 | 160 | 30 |  | 135 ohm | M9184D1005 | Add Q181 for slaved motor applications |
| M904E1358 | M9184D1021 |  |  | Q181A1004 | 160° | 24 | 150 | 180 | 60 |  | 135 ohm | M9184A1019 |  |
| M904E1366 | M9184D1021 |  |  |  | 90 | 24 | 150 | 90 | 30 |  | 135 ohm | M9184D1021 | Univac Special |
| M904E1374 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | 135 ohm | None | Fungus treated |
| M904F1001 | None |  |  |  |  | 24 | 37 | 160 | 15 |  | Series 62 | None |  |
| M904F1019 | None |  |  |  |  | 24 | 75 | 160 | 30 |  | Series 62 | None |  |
| M904F1027 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S | No internal balance circuit, requires Q181 when using R927 |
| M904F1035 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S |  |
| M904F1043 | M6284D1000-S |  |  |  | 90° | 24 | 150 | 90 | 30 |  | Series 62 | M6284F1013-S |  |
| M904F1050 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 240 |  | Series 62 | None |  |
| M904G1000 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M905E1009 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Add Q181 for slaved motor applications |
| M905E1025 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905E1058 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905E1066 | M9185D1004 |  |  | Q181A1004 | 90° | 24 | 50 | 90 | 30 |  | 135 ohm | M9185A1018 |  |
| M905E1074 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905E1082 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905E1108 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905E1116 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905E1124 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905F1008 | M9185D1004 |  |  |  | 160° | 24 | 56 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905F1016 | None |  |  |  |  | 24 | 27 | 160 | 120 |  | 135 ohm | None | M905F1016 designed for 25 Hz |
| M905F1024 | M9185D1004 |  |  |  | 160° | 24 | 27 | 160 | 60 |  | 135 ohm | M9185A1018 | Add Q181 for slaved motor applications |
| M905F1032 | M9185D1004 |  |  |  | 160° | 24 | 56 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905G1007 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Use aux. motor end  N.O. - replacement is normally closed |
| M905G1015 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M905G1023 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Use aux. end; Add Q181 for slaved motor applications |
| M905H1006 | M6285A1005-S |  |  |  | 160° | 24 | 27 | 160 | 60 |  | Series 62 | M6285A1005-S +  Q209/S963 | No internal balance circuit, requires Q181 when using R927 |
| M905H1014 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 |  |  |
| M905J1003 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S |  |
| M905K1002 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S |  |
| M905K1010 | None |  |  |  |  | 24 | 27 | 160 | 120 |  | Series 62 | None | M905K1010 designed for 25 Hz |
| M905L1001 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S | Use aux. motor end, No internal balance circuit; N.O. |
| M905L1019 | None |  |  |  |  | 24 | 27 | 160 | 120 |  | Series 62 | None | M905L1019 designed for 25 Hz |
| M905N1009 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185C1006 |  |
| M905N1017 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185C1006 | For use with W841 |
| M905N1025 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185C1006 | Replacement is less power supply cord, for use with W841, no internal balance circuit |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M905P1007 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S | For use with W841 No internal balance circuit |
| M905P1015 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S | Replacement is less power supply cord, for use with W841, no internal balance circuit |
| M931A1009 | None |  |  |  |  | 24 | 108 | 90 | 30 |  | 135 ohm | M9484D1010 |  |
| M931A1017 | None |  |  |  |  | 24 | 108 | 90 | 60 |  | 135 ohm | None |  |
| M931A1025 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | 135 ohm | M9484D1010 |  |
| M931A1033 | None |  |  |  |  | 24 | 37 | 160 | 15 |  | 135 ohm | None |  |
| M931A1041 | None |  |  |  |  | 24 | 54 | 90 | 15 |  | 135 ohm | M9484D1010 |  |
| M931A1058 | None |  |  |  |  | 24 | 75 | 160 | 30 |  | 135 ohm | M9484D1010 |  |
| M931A1066 | None |  |  |  |  | 24 | 108 | 90 | 30 |  | 135 ohm | M9484D1010 |  |
| M931A1074 | None |  |  |  |  | 24 | 108 | 160 | 60 |  | 135 ohm | M9484D1010 |  |
| M931A1082 | None |  |  |  |  | 24 | 108 | 90 | 60 |  | 135 ohm | None |  |
| M931A1090 | None |  |  |  |  | 24 | 150 | 160 | 240 |  | 135 ohm | None |  |
| M931A1108 | None |  |  |  |  | 24 | 150 | 90 | 60 |  | 135 ohm | None |  |
| M931A1116 | None |  |  |  |  | 24 | 150 | 90 | 30 |  | 135 ohm | M9484D1010 |  |
| M931A1124 | None |  |  |  |  | 24 | 108 | 90/160 | 30/60 |  | 135 ohm | M9494D1000 |  |
| M931A1132 | None |  |  |  |  | 24 | 108 | 90/160 | 60/120 |  | 135 ohm | M9484D1010 |  |
| M931A1140 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 |  |
| M931A1157 | None |  |  |  |  | 24 | 37 | 90/160 | 7.5/15 |  | 135 ohm | None | Special timing |
| M931A1165 | None |  |  |  |  | 24 | 76 | 90/160 | 15/30 |  | 135 ohm | M9484D1010 |  |
| M931A1173 | None |  |  |  |  | 24 | 108 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 |  |
| M931A1181 | None |  |  |  |  | 24 | 108 | 90/160 | 120/  240 |  | 135 ohm | None |  |
| M931A1199 | None |  |  |  |  | 24 | 54 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 |  |
| M931A1207 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | 135 ohm | M9484D1010 |  |
| M931A1215 | None |  |  |  |  | 24 | 108 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 |  |
| M931A1223 | None |  |  |  |  | 24 | 108 | 90/160 | 60/120 | 1 | 135 ohm | None |  |
| M931A1231 | None |  |  |  |  | 24 | 108 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 |  |
| M931A1249 | None |  |  |  |  | 24 | 27 | 90/160 | 7.5/15 | 1 | 135 ohm | None | Special timing |
| M931A1256 | None |  |  |  |  | 24 | 54 | 90/160 | 15/30 | 1 | 135 ohm | M9484E1009 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M931A1264 | None |  |  |  |  | 24 | 108 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 |  |
| M931A1272 | None |  |  |  |  | 24 | 108 | 90/160 | 120/  240 | 1 | 135 ohm | None |  |
| M931A1280 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1033 |  |
| M931A1298 | None |  |  |  |  | 24 | 150 | 90 | 60 |  | 135 ohm | None |  |
| M931A1306 | None |  |  |  |  | 24 | 108 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 |  |
| M931A1314 | None |  |  |  |  | 24 | 108 | 90/160 | 60/120 |  | 135 ohm | M9494D1000 |  |
| M931A1322 | None |  |  |  |  | 24 | 108 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 |  |
| M931A1330 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | 135 ohm | None |  |
| M931B1008 | None |  |  |  |  | 24 | 108 | 90 | 30 |  | Series 62 | M6284F1013-S | No internal balance circuit, requires Q181 when using R927 |
| M931B1016 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 |  | Series 62 | M6284F1013-S |  |
| M931B1024 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S |  |
| M931B1032 | None |  |  |  |  | 24 | 150 | 160 | 30 |  | Series 62 | None |  |
| M931B1040 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S | No internal balance circuit, requires Q181 when using R927 |
| M931B1057 | None |  |  |  |  | 24 | 150 | 90 | 60 |  | Series 62 | None |  |
| M931C1007 | None |  |  |  |  | 24 | 108 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 |  |
| M931C1015 | None |  |  |  |  | 24 | 150 | 90/160 | 60/120 | 1 | 135 ohm | None |  |
| M931C1023 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 |  |
| M931C1031 | None |  |  |  |  | 24 | 37 | 90/160 | 7.5/15 | 1 | 135 ohm | None | International special timing |
| M931C1049 | None |  |  |  |  | 24 | 75 | 90/160 | 15/30 | 1 | 135 ohm | M9484E1009 |  |
| M931C1056 | None |  |  |  |  | 24 | 150 | 90/160 | 120/  240 | 1 | 135 ohm | None |  |
| M931C1064 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 | International |
| M931C1072 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1033 | Switch set in 90° position |
| M931D1006 | None |  |  |  |  | 24 | 150 | 160 | 60 | 1 | 135 ohm | M6284F1013-S | No internal balance circuit |
| M931D1014 | None |  |  |  |  | 24 | 150 | 90 | 30 | 1 | 135 ohm | M6284F1013-S |  |
| M934A1003 | M9164D1009 | 50017460­  001 |  |  | 160° | 240 | 35 | 160 | 60 |  | 135 ohm | None |  |
| M934A1011 | M9164D1009 | 50017460­  003 |  |  | 160° | 120 | 35 | 160 | 60 |  | 135 ohm | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M934A1029 | M9164D1009 |  |  |  | 160° | 24 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 | Wire M9164A1005 to 24 Vac |
| M934A1037 | M9164D1009 | 50017460­  001 |  |  | 160° | 220 | 35 | 160 | 60 |  | 135 ohm | M9164A1088 |  |
| M934A1045 | M9164D1009 |  | 220736B |  | 160° | 24 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 | Wire M9164C1068 to 24 Vac |
| M934A1052 | M9164D1009 | 50017460­  003 | 220736B |  | 160° | 120 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 |  |
| M934A1060 | M9164D1009 | 50017460­  001 | 220736B |  | 160° | 240 | 35 | 160 | 60 | 2 | 135 ohm | None |  |
| M934A1078 | M9164D1009 | 50017460­  001 | 220736B |  | 160° | 220 | 35 | 160 | 60 | 2 | 135 ohm | None |  |
| M934A1086 | M9164D1009 | 50017460­  003 |  |  | 160° | 120 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 |  |
| M934A1094 | M9164D1009 | 50017460­  003 | 220736B |  | 160° | 120 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 |  |
| M934A1102 | M9164D1009 | 50017460­  001 |  |  | 90° | 240 | 35 | 90 | 35 |  | 135 ohm | None | York Special |
| M934A1128 | M9164D1009 | 50017460­  003 | 220736B |  | 90° | 120 | 35 | 90 | 35 | 2 | 135 ohm | M9164C1068 |  |
| M934A1136 | M9164D1009 | 50017460­  003 |  |  | 90° | 120 | 35 | 90 | 35 |  | 135 ohm | M9164A1005 |  |
| M934A1144 | M9164D1009 |  |  |  | 90° | 24 | 35 | 90 | 35 |  | 135 ohm | None |  |
| M934A1169 | M9164D1009 |  |  |  | 160° | 24 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 | Wire M9164A1005 to 24 Vac |
| M934A1193 | M9164D1009 |  | 220736B |  | 160° | 24 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 | Wire M9164C1068 to 24 Vac |
| M934A1201 | M9164D1009 | 50017460­  001 |  |  | 160° | 240 | 35 | 160 | 60 |  | 135 ohm | M9164A1013 |  |
| M934A1219 | M9164D1009 | 50017460­  003 |  |  | 160° | 120 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 |  |
| M934A1227 | M9164D1009 |  |  |  | 160° | 24 | 35 | 160 | 60 |  | 135 ohm | M9164D1009 |  |
| M934A1235 | M9164D1009 | 50017460­  001 |  |  | 160° | 220 | 35 | 160 | 60 |  | 135 ohm | M9164A1088 |  |
| M934A1243 | M9164D1009 |  | 220736B |  | 160° | 24 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 | Wire M9164C1068 to 24 Vac |
| M934A1250 | M9164D1009 | 50017460­  003 | 220736B |  | 160° | 120 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be**  **Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required**  **Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M934A1268 | M9164D1009 | 50017460­  001 | 220736B |  | 160° | 240 | 35 | 160 | 60 | 2 | 135 ohm | None |  |
| M934A1276 | M9164D1009 | 50017460­  001 | 220736B |  | 160° | 220 | 35 | 160 | 60 | 2 | 135 ohm | None |  |
| M934A1284 | M9164D1009 | 50017460­  003 |  |  | 160° | 120 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 |  |
| M934A1292 | M9164D1009 | 50017460­  003 | 220736B |  | 160° | 120 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 |  |
| M934A1300 | M9164D1009 | 50017460­  001 |  |  | 90° | 240 | 35 | 90 | 30 |  | 135 ohm | None | York Special |
| M934A1318 | M9164D1009 | 50017460­  003 | 220736B |  | 90° | 120 | 35 | 90 | 30 | 2 | 135 ohm | M9164C1068 |  |
| M934A1326 | M9164D1009 | 50017460­  003 |  |  | 90° | 120 | 35 | 90 | 30 |  | 135 ohm | M9164A1005 | Carrier Special |
| M934A1334 | M9164D1009 |  |  |  | 90° | 24 | 35 | 90 | 30 |  | 135 ohm | None |  |
| M934A1342 | M9164D1009 |  |  |  | 160° | 24 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 | Wire M9164A1005 to 24 Vac |
| M934A1359 | M9164D1009 |  | 220736B |  | 160° | 24 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 | Wire M9164C1068 to 24 Vac |
| M934A1367 | M9164D1009 | 50017460­  003 |  | Q209E | 160° | 120 | 35 | 160 | 60 |  | 135 ohm | None | Carrier Special |
| M934A1375 | M9164D1009 | 50017460­  001 |  |  | 160° | 240 | 35 | 160 | 60 |  | 135 ohm | None |  |
| M934A1383 | M9164D1009 | 50017460­  001 |  |  | 160° | 240 | 35 | 160 | 60 |  | 135 ohm | M9164A1013 | For use with W899A systems |
| M934A1391 | M9164D1009 | 50017460­  003 |  |  | 90° | 120 | 35 | 90 | 35 |  | 135 ohm | M9164A1005 |  |
| M934A1409 | M9164D1009 |  |  |  | 90° | 24 | 35 | 90 | 35 |  | 135 ohm | None |  |
| M934A1425 | M9164D1009 |  |  |  | 160° | 24 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 | Use with W899A,E,F systems; Wire M9164A1005 to 24 Vac |
| M934A1433 | M9164D1009 | 50017460­  001 | 220736B |  | 160° | 240 | 35 | 160 | 60 | 2 | 135 ohm | None | For use with W899A systems |
| M934A1441 | M9164D1009 | 50017460­  003 |  |  | 160° | 120 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 |  |
| M934A1458 | M9164D1009 |  |  |  | 90° | 24 | 35 | 90 | 35 |  | 135 ohm | None |  |
| M934A1466 | M9164D1009 |  |  |  | 90° | 24 | 35 | 90 | 35 |  | 135 ohm | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M934A1474 | M9164D1009 |  | 220736B |  | 160° | 24 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 | Wire M9164C1068 to 24 Vac |
| M934A1482 | M9164D1009 | 50017460­  003 | 220736B |  | 160° | 120 | 35 | 160 | 60 | 2 | 135 ohm | M9164C1068 |  |
| M934A1490 | M9164D1009 |  |  | Q209E | 160° | 24 | 35 | 160 | 60 |  | 135 ohm | None | Carrier Special |
| M934A1508 | M9164D1009 | 50017460­  001 |  |  | 160° | 240 | 35 | 160 | 60 |  | 135 ohm | None | Use with W899A systems |
| M934A1516 | M9164D1009 | 50017460­  003 | 220736A |  | 90° | 120 | 35 | 90 | 35 | 1 | 135 ohm | M9164C1068 |  |
| M934A1524 | M9164D1009 |  |  |  | 160° | 24 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 | Wire M9164A1005 to 24 Vac |
| M934A1532 | M9164D1009 | 50017460­  001 |  |  | 90° | 240 | 35 | 90 | 35 |  | 135 ohm | None |  |
| M934A1540 | M9164D1009 | 50017460­  003 |  |  | 90° | 120 | 35 | 90 | 35 |  | 135 ohm | M9164A1005 | York Special |
| M934A1557 | M9164D1009 | 50017460­  001 |  |  | 160° | 208/240 | 35 | 160 | 60 |  | 135 ohm | None | G.E. Special |
| M934A1565 | M9164D1009 | 50017460­  003 | 220736A |  | 90° | 120 | 35 | 90 | 35 | 1 | 135 ohm | M9164C1068 | Reset aux. switch |
| M934A1573 | M9164D1009 | 50017460­  003 |  |  | 160° | 120 | 35 | 160 | 60 |  | 135 ohm | M9164A1005 | Carrier Special |
| M934A1599 | M9164D1009 |  |  | Q209E | 160° | 24 | 35 | 160 | 60 |  | 135 ohm | None |  |
| M934B1036 | M6284D1000-S |  |  |  | 90° | 24 | 35 | 90 | 35 |  | Series 62 | M6284F1013-S | No internal balance circuit, requires Q181 when using R927 |
| M934C1001 | M9164D1009 | 50017460­  003 |  | Q181A1004 | 90° | 120 | 35 | 90 | 35 |  | 135 ohm | M9164A1005  +Q181A1004 | Nesbitt Special; Q181 for Nesbitt Relay Driver |
| M934D1000 | M9174D1007 | 50017460­  003 | 220736A |  | 160° | 120 | 75 | 160 | 60 | 1 | 135 ohm | M9174B1043 |  |
| M934D1018 | M9174D1007 | 50017460­  003 | 220736B |  | 160° | 120 | 75 | 160 | 60 | 2 | 135 ohm | M9174C1033 |  |
| M934D1026 | M9174D1007 | 50017460­  003 | 220736A |  | 90° | 120 | 75 | 90 | 35 | 1 | 135 ohm | M9174B1027 +  220738A |  |
| M934D1034 | M9174D1007 | 50017460­  003 | 220736B |  | 90° | 120 | 75 | 90 | 35 | 2 | 135 ohm | M9174C1025 |  |
| M934D1042 | M9174D1007 | 50017460­  003 | 220736B |  | 90° | 120 | 75 | 90 | 35 | 2 | 135 ohm | None | Cleaver Brooks Special |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M934D1059 | M9174D1007 | 50017460­  003 | 220736A |  | 90° | 120 | 75 | 90 | 35 | 1 | 135 ohm | None |  |
| M934E1009 | M9174D1007 |  |  |  | 160° | 24 | 75 | 160 | 60 |  | 135 ohm | M9174B1043 | Remove transformer |
| M934E1017 | M9174D1007 | 50017460­  003 |  |  | 160° | 120 | 75 | 160 | 60 |  | 135 ohm | M9174B1043 |  |
| M934E1025 | M9174D1007 | 50017460­  003 |  |  | 90° | 120 | 75 | 90 | 35 |  | 135 ohm | M9174B1043 |  |
| M941A1008 | None |  |  |  |  | 24 | 75 | 90/160 | 15/30 |  | 135 ohm | M9484D1010 | Shipped in 160° position |
| M941A1016 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 | Tapped aux shaft, Shipped in 160° position |
| M941A1024 | None |  |  |  |  | 24 | 150 | 90/160 | 60/120 |  | 135 ohm | M9484D1010 | Shipped in 160° position |
| M941A1032 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 | Tapped aux shaft; Shipped in 90° position |
| M941A1040 | None |  |  |  |  | 24 | 37 | 90/160 | 7.5/15 |  | 135 ohm | None | Special timing |
| M941A1057 | None |  |  |  |  | 24 | 75 | 90/160 | 15/30 |  | 135 ohm | M9484D1010 | Shipped in 90° position |
| M941A1065 | None |  |  |  |  | 24 | 75 | 90/160 | 15/30 |  | 135 ohm | M9484D1010 | International Shipped in 160° position |
| M941A1073 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 | Tapped aux shaft; International Shipped in 90° position |
| M941A1081 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 | Tapped aux shaft; International Shipped in 160° position |
| M941A1099 | None |  |  |  |  | 24 | 150 | 90/160 | 60/120 |  | 135 ohm | M9494D1000 | International Shipped in 90° position |
| M941A1107 | None |  |  |  |  | 24 | 37 | 90/160 | 7.5/15 |  | 135 ohm | None | Special timing shipped in 90° position |
| M941A4002 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9484D1010 | Canada Special; Tapped aux shaft |
| M941B1007 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 |  | Series 62 | M6284F1013-S | No internal balance circuit |
| M941B1015 | M6284D1000-S |  |  |  |  | 24 | 50 | 90/160 | 30/60 |  | Series 62 | None |  |
| M941C1006 | None |  |  |  |  | 24 | 75 | 90/160 | 15/30 | 1 | 135 ohm | M9484E1009 | Shipped in 160° position |
| M941C1014 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 | Tapped aux shaft; Shipped in 160° position |
| M941C1022 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1033 | Shipped in 90° position |
| M941C1030 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1033 | Tapped aux shaft, aux switch set to 7°; Shipped in 90° position, switch set at 4°, with crankarm |
| M941C1048 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1033 | Aux. switch set at 4°, with crankarm; Shipped in 90° position. |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M941C1055 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1033 | Tapped aux shaft, aux. switches set to 4°; International, shipped in 90° position, with tapped shaft |
| M941C1063 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1033 | Tapped aux shaft, replaced model includes crank arm; Tapped shaft |
| M941C1089 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | None | Cleaver Brooks Special, Tapped aux shaft |
| M941C4000 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 +  220741A | Canada Special, Tapped aux shaft, aux switch set at 5°, tapped shaft |
| M941C4018 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | M9484E1017 +  220741A | Canada Special, Tapped aux shaft, aux switch set at 30°, tapped shaft |
| M941D1005 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9484F1007 | Aux switched set to 7°/57°; Shipped in 90° position, switches set at 5°/54°, no tapped shaft |
| M941D1013 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9484F1007 | Tapped aux shaft, aux. switch set to 7°/57°;  Shipped in 90° position, Switches set at 5°/ 54°, crankarm, no tapped shaft |
| M941D1021 | None |  |  |  |  | 24 | 75 | 90/160 | 15/30 | 2 | 135 ohm | M9484F1023 | Tapped aux shaft, shipped in 160° position |
| M941D1039 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9484F1031 | Tapped aux shaft, aux switches set to 5°/ 54°; tapped shaft, shipped in 90° position |
| M941D1047 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9484F1049 | Tapped aux shaft, aux switches set to 35°/ 120° |
| M941D1054 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9484F1031 | Tapped aux shaft, aux switches set to 5°/ 54°; International, Shipped in 90° position |
| M941D1062 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9484F1031 | Tapped aux shaft, aux switches set to 90°/ 107°; International |
| M941D1070 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9484F1007 | Cleaver Brooks Special; Tapped aux shaft, aux switches set to 5°/54° |
| M941D1112 | None |  |  |  |  | 120 | 300 | 90/160 | 60/120 | 2 | 135 ohm | None | Aux. switches to 7°/57° |
| M941D4009 | None |  |  |  |  | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9484F4001 | Canada Special, requires 220741A, switch preset at 5°/54°; Tapped aux shaft, aux. shaft set to 5°/54° |
| M941D4017 | None |  |  |  |  | 24 | 75 | 90/160 | 15/30 | 2 | 135 ohm | M9484F4019 |  |
| M941E1012 | None |  |  |  |  | 24 | 75 | 160 | 30 |  | 135 ohm | M9484D1010 | International |
| M941E1038 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | 135 ohm | M9484D1010 |  |
| M941E1046 | None |  |  |  |  | 24 | 150 | 160 | 60 |  | 135 ohm | M9484D1010 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M941E1053 | None |  |  |  |  | 24 | 150 | 90 | 60 |  | 135 ohm | None |  |
| M941E1061 | None |  |  |  |  | 24 | 75 | 90 | 60 |  | 135 ohm | None |  |
| M943A1004 | None |  |  |  |  | 24 | 40 | 240 | 90 | 2 | 135 ohm | None | Singer Special, 240° stroke |
| M944A1002 | M9184D1021 |  |  |  | 160° | 24 | 150 | 160 | 60 |  | 135 ohm | M9184A1019 |  |
| M944A1010 | M9184D1021 |  |  |  | 160° | 24 | 150 | 160 | 60 |  | 135 ohm | M9184A1019 |  |
| M944A1028 | M9184D1021 |  |  |  | 90° | 24 | 150 | 90 | 30 |  | 135 ohm | M9184D1021 |  |
| M944A1036 | None |  |  |  |  | 24 | 37 | 160 | 15 |  | 135 ohm | None |  |
| M944A1044 | None |  |  |  |  | 24 | 37 | 310 | 15 |  | 135 ohm | None |  |
| M944A1051 | M9184D1021 |  |  |  | 90° | 24 | 75 | 90 | 30 |  | 135 ohm | m9184F1034 | Univac Special |
| M944A1069 | M9184D1021 | 50017460­  003 |  |  | 90° | 120 | 75 | 90 | 30 |  | 135 ohm | m9184F1034 | Requires 50017460-001 |
| M944A1119 | None |  |  |  |  | 24 | 37 | 335 | 15 |  | 135 ohm | None | No 335° stroke motors |
| M944A1127 | None |  |  |  |  | 24 | 75 | 335 | 30 |  | 135 ohm | None |  |
| M944A1150 | M9184D1021 |  |  |  | 160° | 24 | 150 | 160 | 120 |  | 135 ohm | M9194D1003 | Chrysler Special, check timing |
| M944A1168 | M9184D1021 |  |  |  | 160° | 24 | 150 | 160 | 60 |  | 135 ohm | M9184A1019 |  |
| M944A1176 | M9184D1021 |  |  |  | 160° | 24 | 150 | 160 | 60 |  | 135 ohm | M9184A1019 |  |
| M944A1192 | M9184D1021 |  |  |  | 90° | 24 | 75 | 90 | 30 |  | 135 ohm | m9184F1034 | Nesbitt Special |
| M944B1001 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S | No internal balance circuit, requires Q181 when using R927 |
| M944B1019 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S |  |
| M944B1027 | None |  |  |  |  | 24 | 37 | 160 | 15 |  | Series 62 | None |  |
| M944B1035 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 240 |  | Series 62 | None |  |
| M944B1043 | M6284D1000-S |  |  |  | 90° | 24 | 75 | 90 | 30 |  | Series 62 | M6284A1055-S | No internal balance circuit, check timing and stroke, requires Q181 when using R927 |
| M944B1167 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S |  |
| M944B1175 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S |  |
| M944B1183 | M6284D1000-S |  |  |  | 160° | 24 | 37 | 160 | 15 |  | Series 62 | M6284D1000-S |  |
| M944B1191 | M6294D1008-S |  |  |  | 160° | 24 | 300 | 160 | 240 |  | Series 62 | None | No internal balance circuit, requires Q181 when using R927 |
| M944B1209 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S |  |
| M944B1241 | M6294D1008-S |  | 220736A |  | 160° | 24 | 150 | 160 | 240 | 1 | Series 62 | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M944B4005 | M6284D1000-S |  |  |  | ADJ | 24 | 75 | 90/160 | 15/30 |  | Series 62 | M6284D1000-S | Canada Special, no internal balance circuit, requires Q181 when using R927 |
| M944C1000 | M9184D1021 |  |  |  | ADJ | 24 | 75 | 90/160 | 15/30 |  | 135 ohm | M9184D1005 | M9184D is 30/60 sec timing |
| M944C1018 | M9194D1003 |  |  |  | ADJ | 24 | 300 | 90/160 | 120/  240 |  | 135 ohm | M9194D1003 |  |
| M944C1042 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9184D1021 |  |
| M944C1059 | M9194D1003 |  | 220736A |  | ADJ | 24 | 300 | 90/160 | 120/  240 | 1 | 135 ohm | M9194E1000 |  |
| M944C4004 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9184D1021 | Canada Special |
| M944C4012 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 90/160 | 120/  240 |  | 135 ohm | M9194D1003 |  |
| M944D1009 | M9184D1021 |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | m9184F1034 |  |
| M944D1017 | M9184D1021 |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | m9184F1034 |  |
| M944E1008 | M6284D1000-S |  | 220736B |  | ADJ | 24 | 75 | 90/160 | 15/30 | 2 | Series 62 | None | M6284 is 30/60 sec timing, No internal balance circuit |
| M944E1016 | M6284D1000-S |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | Series 62 | M6284F1013-S | No internal balance circuit |
| M944E1024 | M6284D1000-S |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | Series 62 | M6284F1013-S | Set aux switches at 4°/54°, no internal balance circuit |
| M944E1032 | M6284D1000-S |  | 220736B |  | ADJ | 24 | 75 | 90/160 | 15/30 | 2 | Series 62 | None | Replaced motor is 2X faster, No internal balance circuit |
| M944E1040 | M6284D1000-S |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | Series 62 | M6284F1013-S | No internal balance circuit |
| M944E1057 | M6284D1000-S |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | Series 62 | M6284F1013-S | Set aux switches at 4°/54°, no internal balance circuit |
| M944E1081 | M6284D1000-S |  | 220736B |  | 90° | 24 | 75 | 90 | 30 | 2 | Series 62 | M6284F1013-S | Set aux switches at 42°/48°, no internal balance circuit |
| M944E1099 | M6284D1000-S |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | Series 62 | M6284F1013-S | No internal balance circuit |
| M944F1007 | M9184D1021 |  |  |  | 160° | 24 | 150 | 160 | 60 |  | 135 ohm | M9184A1019 | Use Q181 for slaved motor applications |
| M944G1006 | M9184D1021 |  | 220736B |  | 160° | 24 | 150 | 160 | 60 | 2 | Series 62 | m9184F1034 |  |
| M944G1014 | M9184D1021 |  | 220736B |  | 160° | 24 | 150 | 160 | 60 | 2 | Series 62 | m9184F1034 |  |
| M944G1022 | M6284D1000-S | 50017460­  003 |  |  | 160° | 120 | 150 | 160 | 60 |  | Series 62 | M6284A1055-S | No internal balance circuit, change control circuit to 24 Vac |
| M944G1030 | M6284D1000-S | 50017460­  003 |  |  | 90° | 120 | 150 | 90 | 30 |  | Series 62 | M6284A1055-S |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be**  **Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M944G1048 | M6284D1000-S | 50017460­  003 |  |  | 160° | 120 | 150 | 160 | 60 |  | Series 62 | M6284A1055-S |  |
| M944G1055 | M6284D1000-S | 50017460­  003 |  |  | 160° | 120 | 150 | 160 | 240 |  | Series 62 | None | No internal balance circuit |
| M944G1063 | M6284D1000-S | 50017460­  003 |  |  | 160° | 120 | 150 | 160 | 60 |  | Series 62 | M6284A1055-S | No internal balance circuit, change control circuit to 24 Vac |
| M944G1071 | M6284D1000-S | 50017460­  003 |  |  | 90° | 120 | 150 | 90 | 30 |  | Series 62 | M6284A1055-S |  |
| M944G1089 | M6284D1000-S | 50017460­  003 |  |  | 160° | 120 | 150 | 160 | 60 |  | Series 62 | M6284A1055-S |  |
| M944G1097 | M6284D1000-S | 50017460­  003 |  |  | 90° | 120 | 150 | 90 | 30 |  | Series 62 | M6284A1055-S |  |
| M944G1105 | M6294D1008-S | 50017460­  003 |  |  | 160° | 120 | 300 | 160 | 240 |  | Series 62 | None | No internal balance circuit |
| M944G1121 | M6294D1008-S | 50017460­  003 | 220736A |  | 160° | 120 | 300 | 160 | 240 | 1 | Series 62 | None |  |
| M944H1013 | M6284D1000-S | 50017460­  003 | 220736A |  | 160° | 120 | 150 | 160 | 60 | 1 | Series 62 | M6284F1013-S | No internal balance circuit, change control circuit to 24 Vac; Requires 50017460-003 |
| M944H1021 | M6284D1000-S | 50017460­  003 | 220736A |  | 160° | 120 | 150 | 160 | 60 | 1 | Series 62 | M6284F1013-S |  |
| M944H1039 | M6284D1000-S | 50017460­  003 | 220736A |  | 160° | 120 | 150 | 160 | 60 | 1 | Series 62 | M6284F1013-S +  50017460-003 | York Special, no internal balance circuit, change control circuit to 24 V |
| M944H1047 | M6284D1000-S | 50017460­  003 | 220736A |  | 160° | 120 | 150 | 160 | 60 | 1 | Series 62 | M6284F1013-S +  50017460-003 | No internal balance circuit; Change control circuit to 24V |
| M944H1062 | M6294D1008-S | 50017460­  003 | 220736A |  | 160° | 120 | 150 | 160 | 240 | 1 | Series 62 | None | Trane Special, no internal balance circuit |
| M944J1002 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S | No internal balance circuit, requires Q181 for aux. pot and when using R927 |
| M944J1051 | M6284D1000-S |  |  |  | 160° | 24 | 150 | 160 | 60 |  | Series 62 | M6284D1000-S |  |
| M944K1001 | M6284D1000-S | 50017460­  003 | 220736B |  | 160° | 120 | 150 | 160 | 60 | 2 | Series 62 | M6284F1013-S | No internal balance circuit, change control circuit to 24 Vac; Requires 50017460-003 |
| M944K1019 | M6284D1000-S | 50017460­  003 | 220736B |  | 160° | 120 | 150 | 160 | 60 | 2 | Series 62 | M6284F1013-S |  |
| M944L1018 | M9184D1021 | 50017460­  003 |  |  | ADJ | 120 | 150 | 90/160 | 120/  240 |  | 135 ohm | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M944N1024 | M9184D1021 |  | 220736A |  | 160° | 24 | 75 | 160 | 30 | 1 | 135 ohm | M6184D1001  +Q607A1050 | Tapped shaft |
| M944N1032 | M9184D1021 |  | 220736A |  | 90° | 24 | 150 | 90 | 30 | 1 | 135 ohm | M9184F1034 |  |
| M944N1040 | M9184D1021 |  | 220736A |  | 90° | 24 | 150 | 90 | 30 | 1 | 135 ohm | M9184F1034 |  |
| M944N1057 | M9184D1021 |  | 220736A |  | 160° | 24 | 150 | 160 | 60 | 1 | 135 ohm | M9184F1034 |  |
| M944N1065 | M9184D1021 |  | 220736A |  | 160° | 24 | 75 | 160 | 30 | 1 | 135 ohm | M6184D1001 | M9184D is 60 sec at 160° stroke; Tapped shaft; Requires Q607A1050 |
| M944N1073 | M9184D1021 |  | 220736A |  | 90° | 24 | 150 | 90 | 30 | 1 | 135 ohm | M9184F1034 | Tapped shaft |
| M944N1081 | M9184D1021 |  | 220736A |  | 90° | 24 | 150 | 90 | 30 | 1 | 135 ohm | M9184F1034 |  |
| M944P1014 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | M9184F1034 |  |
| M944P1022 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | M9184F1034 |  |
| M944P1030 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | M9184F1034 |  |
| M944P1048 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | M9184F1034 |  |
| M944R1012 | M6294D1008-S | 50017460­  003 | 220736A |  | 160° | 120 | 150 | 160 | 120 | 1 | Series 62 | None | Carrier Special; Check timing and stroke, requires Q181 when using R927 |
| M944R1020 | M6294D1008-S | 50017460­  003 | 220736B |  | 160° | 120 | 150 | 160 | 120 | 2 | Series 62 | None |  |
| M944S1001 | M6284D1000-S | 50017460­  003 | 220736B |  | ADJ | 120 | 75 | 90/160 | 15/30 | 2 | Series 62 | None | M6284 is 30/60 sec timing, No internal balance circuit |
| M944S1019 | M6284D1000-S | 50017460­  003 | 220736B |  | ADJ | 120 | 150 | 90/160 | 30/60 | 2 | Series 62 | M6284F1013-S | No internal balance circuit; Requires 50017460-003 |
| M944S1027 | M6284D1000-S | 50017460­  003 | 220736B |  | ADJ | 120 | 150 | 90/160 | 30/60 | 2 | Series 62 | M6284F1013-S |  |
| M945A1009 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M945A1017 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M945A1025 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Less power supply cord |
| M945A1033 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M945A1066 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | For use with W899B systems |
| M945A1074 | M9185D1004 |  |  |  | 90° | 24 | 50 | 90 | 35 |  | 135 ohm | M9185A1018 |  |
| M945A1082 | M9185D1004 |  |  |  | 90° | 24 | 50 | 90 | 35 |  | 135 ohm | M9185A1018 |  |
| M945A1090 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185D1004 |  |
| M945A1108 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | York Special |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M945A1116 | M9185D1004 |  |  |  | 90° | 24 | 50 | 90 | 35 |  | 135 ohm | M9185A1018 |  |
| M945A1124 | M9185D1004 |  |  |  | 90° | 24 | 50 | 90 | 35 |  | 135 ohm | M9185A1018 | Nesbitt Special |
| M945A1157 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 90/160 | 30/60 |  | 135 ohm | M9185D1004 |  |
| M945A4003 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 90/160 | 30/60 |  | 135 ohm | M9185D1004 | Canada Special |
| M945AA1007 | M9185D1004 |  | 220736B |  | 90° | 24 | 50 | 90 | 60 | 2 |  | None | Nesbitt Special, N.O. mech.; M9185D is 30 sec., 90° stroke, use aux. end |
| M945AB1005 | M9185D1004 |  | 220736A |  | 90° | 24 | 50 | 90 | 60 | 1 |  | None | Nesbitt Special; M9185 is 30 sec at 90° stroke |
| M945AB1013 | M9185D1004 |  | 220736A |  | 90° | 24 | 50 | 90 | 60 | 1 |  | None |  |
| M945AD1001 | M6285A1005-S |  |  |  | 90° | 24 | 25 | 90 | 60 |  | Series 62 | None | Trane Special, No internal balance circuit |
| M945B1057 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S | No internal balance circuit, requires Q181 when using R927 |
| M945B1065 | M6285A1005-S |  |  |  | 90° | 24 | 50 | 90 | 30 |  | Series 62 | M6285A1005-S |  |
| M945B1073 | None |  |  |  |  | 24 | 50 | 90 | 30 |  | Series 62 | None | Nesbitt Special, includes 1.0K ohm feedback pot |
| M945B1081 | None |  |  |  |  | 24 | 50 | 160 | 60 |  | Series 62 | None |  |
| M945B1115 | M6285A1005-S | 50017460­  003 |  |  | 90° | 120 | 50 | 90 | 30 |  | Series 62 | None | Trane Special, no internal balance circuit |
| M945B4002 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S | Canada Special, no internal balance circuit, requires Q181 when using R927 |
| M945C1007 | M6285A1005-S |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | Series 62 | M6285C1001-S | No internal balance circuit, requires Q181 when using R927 |
| M945C1015 | M6285A1005-S |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | Series 62 | M6285C1001-S |  |
| M945C1031 | M6285A1005-S |  | 220736A |  | 90° | 24 | 50 | 90 | 30 | 1 | Series 62 | None |  |
| M945D1006 | M9185D1004 |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | 135 ohm | M9185C1006 |  |
| M945D1030 | None |  |  |  |  | 24 | 50 | 160 | 60 | 2 | 135 ohm | None |  |
| M945D1048 | None |  |  |  |  | 24 | 50 | 160 | 60 | 2 | 135 ohm | None |  |
| M945E1005 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Q181: slaved motor application |
| M945E1013 | M9185D1004 |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Add Q181 for slaved motor applications |
| M945F1004 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Use aux. motor end; N.O. - replacement is normally closed |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M945F1038 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Use aux. motor end; For use with W899M systems, N.O. - replacement is normally closed |
| M945F1046 | M9185D1004 | 50017460­  001 |  |  | 160° | 208 | 50 | 160 | 60 |  | 135 ohm | None | Use aux. motor end; N.O. |
| M945F1053 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | York Special, N.O.; Use aux. motor end - replacement is normally closed |
| M945F4008 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Canada Special, N.O.; Use aux. motor end - replacement is normally closed |
| M945G1003 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S | Use aux. motor end; No internal balance circuit, requires Q181 when using R927 |
| M945G1037 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S |  |
| M945G1045 | None |  |  |  |  | 24 | 50 | 160 | 60 |  | Series 62 | None | Includes 1.8K ohm feedback pot |
| M945G1052 | None |  |  |  |  | 220 | 50 | 160 | 60 |  | Series 62 | None | IBM Special, N.O., 100K-ohm pot. |
| M945H1002 | M9185D1004 |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | 135 ohm | M9185C1006 | M945H includes internal heater |
| M945H1010 | M9185D1004 |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | 135 ohm | M9185C1006 |  |
| M945J1009 | M9185D1004 |  | 220736A |  | 160° | 24 | 50 | 160 | 60 | 1 | 135 ohm | M9185C1006 |  |
| M945J1017 | M9185D1004 |  | 220736A |  | 160° | 24 | 50 | 160 | 60 | 1 | 135 ohm | M9185C1006 | Less power supply cord |
| M945J1025 | M9185D1004 |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | 135 ohm | M9185C1006 |  |
| M945J1033 | M9185D1004 | 50017460­  003 | 220736B |  | 160° | 120 | 50 | 160 | 60 | 2 | 135 ohm | None |  |
| M945K1008 | M6285A1005-S |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | Series 62 | M6285C1001-S | No internal balance circuit |
| M945K1016 | M6285A1005-S |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | Series 62 | M6285C1001-S |  |
| M945L1007 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S | No internal balance circuit, requires Q181 when using R927 |
| M945L1015 | M6285A1005-S |  |  |  | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S |  |
| M945M1006 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M945M1022 | M9185D1004 | 50017460­  001 |  |  | 160° | 208/240 | 50 | 160 | 60 |  | 135 ohm | None | G.E. Special |
| M945M1030 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 | Use with W899C systems |
| M945M1048 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M945Y1002 | M6285A1005-S |  |  | Q181A1004 | 160° | 24 | 50 | 160 | 60 |  | Series 62 | M6285A1005-S | Add Q181 for slaved motor applications |
| M945Y1010 | None |  |  |  |  | 24 | 50 | 90 | 60 |  | 135 ohm | None | Nesbitt Special |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M945Z1001 | M9185D1004 |  | 220736B |  | 160° | 24 | 50 | 160 | 60 | 2 | 135 ohm | M9185A1018 | N.O.; Requires Q607B1067 - replacement is normally closed |
| M945Z1019 | M9185D1004 | 50017460­  001 |  |  | 160° | 208/240 | 50 | 160 | 60 |  | 135 ohm | None | N.O. |
| M954A1001 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9184D1021 |  |
| M954A1019 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9184D1021 |  |
| M954A1027 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9184D1021 |  |
| M954A1035 | M9184D1021 |  |  |  | ADJ | 24 | 150 | 90/160 | 30/60 |  | 135 ohm | M9184D1021 |  |
| M954B1000 | M9184D1021 |  | 220736B |  | 160° | 24 | 150 | 160 | 60 | 2 | 135 ohm | M9184F1034 |  |
| M954B1018 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | M9184C1031 |  |
| M954B1026 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | M9184C1031 |  |
| M954B1034 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | M9184C1031 |  |
| M954B1042 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | M9184C1031 |  |
| M954B1059 | M9184D1021 | 50017460­  003 | 220736B |  | 160° | 120 | 75 | 160 | 30 | 2 | 135 ohm | M9184D1005 | Requires 50017460-001 |
| M954B1067 | M9184D1021 |  | 220736B |  | 160° | 24 | 150 | 160 | 60 | 2 | 135 ohm | M9184F1034 |  |
| M954B1075 | M9184D1021 |  | 220736B |  | 90° | 24 | 150 | 90 | 30 | 2 | 135 ohm | None | Cleaver Brooks Special |
| M954C1009 | M9184D1021 |  | 220736A |  | 160° | 24 | 75 | 160 | 30 | 1 | 135 ohm | M9184D1005 |  |
| M954C1017 | M9184D1021 |  | 220736A |  | 90° | 24 | 150 | 90 | 30 | 1 | 135 ohm | M9184F1034 |  |
| M954C1025 | M9184D1021 |  | 220736A |  | 90° | 24 | 150 | 90 | 30 | 1 | 135 ohm | M9184F1034 |  |
| M954C1033 | M9184D1021 |  | 220736A |  | 160° | 24 | 150 | 160 | 60 | 1 | 135 ohm | M9184F1034 |  |
| M954C1041 | M9184D1021 |  | 220736A |  | 160° | 24 | 75 | 160 | 30 | 1 | 135 ohm | M9184D1005 |  |
| M954C1058 | M9184D1021 |  | 220736A |  | 90° | 24 | 150 | 90 | 30 | 1 | 135 ohm | M9184F1034 |  |
| M954C1066 | M9184D1021 |  | 220736A |  | 90° | 24 | 150 | 90 | 30 | 1 | 135 ohm | M9184F1034 |  |
| M954C1074 | M9184D1021 |  | 220736A |  | 160° | 24 | 150 | 160 | 60 | 1 | 135 ohm | M9184F1034 |  |
| M954C1082 | M9184D1021 |  | 220736A |  | 90° | 24 | 75 | 90 | 30 | 1 | 135 ohm | M9184F1034 | Cleaver Brooks Special |
| M954C4003 | M9184D1021 |  | 220736A |  | ADJ | 24 | 150 | 90/160 | 30/60 | 1 | 135 ohm | None | Canada Special, aux. switch set at 120° |
| M954D1008 | M9184D1021 |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9184F1034 |  |
| M954D1016 | M9184D1021 |  | 220736B |  | ADJ | 24 | 150 | 90/160 | 30/60 | 2 | 135 ohm | M9184F1034 |  |
| M954G1052 | None |  |  |  |  | 220 | 50 | 160 | 60 |  | Series 62 | None | IBM Special, N.O., 100K-ohm pot. |
| M955A1008 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 90/160 | 30/60 |  | 135 ohm | M9185D1004 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M955A1016 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 90/160 | 30/60 |  | 135 ohm | M9185D1004 |  |
| M955A1024 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 90/160 | 30/60 |  | 135 ohm | M9185D1004 |  |
| M955A1032 | M9185D1004 |  |  |  | ADJ | 24 | 50 | 90/160 | 30/60 |  | 135 ohm | M9185D1004 |  |
| M955B1007 | M9185D1004 |  | 220736B |  | ADJ | 24 | 50 | 90/160 | 30/60 | 2 | 135 ohm | M9185E1019  +Q607A1050 |  |
| M955C1006 | M9185D1004 |  | 220736A |  | ADJ | 24 | 50 | 90/160 | 30/60 | 1 | 135 ohm | M9185E1019 |  |
| M955C1014 | M9185D1004 |  | 220736A |  | ADJ | 24 | 50 | 90/160 | 30/60 | 1 | 135 ohm | M9185E1019 |  |
| M955C4000 | M9185D1004 |  | 220736A |  | ADJ | 24 | 50 | 90/160 | 30/60 | 1 | 135 ohm | M9185E1019 | Canada Special, Tapped shaft; TRADELINE shaft not tapped |
| M955D1005 | M9185D1004 |  |  |  | 160° | 24 | 50 | 160 | 60 |  | 135 ohm | M9185A1018 |  |
| M955D1013 | M9185D1004 |  |  |  | 90° | 24 | 50 | 90 | 30 |  | 135 ohm | M9185A1018 |  |
| M955D1039 | M9185D1004 | 50017460­  003 |  |  | 90° | 120 | 50 | 90 | 30 |  | 135 ohm | None |  |
| M955D1047 | M9185D1004 |  |  |  | 90° | 24 | 50 | 90 | 30 |  | 135 ohm | M9185A1018 | Lennox Special |
| M955D1054 | M9185D1004 |  |  |  | 90° | 24 | 50 | 90 | 30 |  | 135 ohm | M9184D1021 | York Special |
| M955E1004 | M9185D1004 | 50017460­  003 | 220736A |  | 90° | 120 | 50 | 90 | 30 | 1 | 135 ohm | None |  |
| M955E1012 | M9185D1014 | 50017460­  003 | 220736A | Q209E | 90° | 120 | 50 | 90 | 30 | 1 | 135 ohm | None | Trane Special, includes Q209C |
| M965A1007 | M9185D1004 |  |  |  | 160° | 24 | 25 | 160 | 40 |  | 135 ohm | M9185D1004 |  |
| M965A1015 | M9185D1004 |  |  |  | 160° | 24 | 25 | 160 | 40 |  | 135 ohm | M9185D1004 | For use with W963B systems |
| M965A1023 | M9185D1004 | 50017460­  003 |  |  | 160° | 120 | 25 | 160 | 40 |  | 135 ohm | None |  |
| M965A1031 | M9185D1004 | 50017460­  003 |  |  | 90° | 120 | 25 | 90 | 23 |  | 135 ohm | None | York Special |
| M965A1049 | M9185D1004 | 50017460­  003 |  |  | 90° | 120 | 25 | 90 | 23 |  | 135 ohm | M9185D1004 | Requires 50017460-003 |
| M965A1064 | M9185D1004 |  |  |  | 90° | 24 | 25 | 90 | 23 |  | 135 ohm | M9185D1004 | No balance relay |
| M965A1072 | M9185D1004 |  |  |  | 90° | 24 | 25 | 90 | 23 |  | 135 ohm | M9185D1004 | Trane Special |
| M965B1006 | M9185D1004 |  | 220736B |  | 160° | 24 | 25 | 160 | 40 | 2 | 135 ohm | None |  |
| M965B1014 | M9185D1004 | 50017460­  001 | 220736B |  | 90° | 240 | 25 | 90 | 23 | 2 | 135 ohm | None |  |
| M965B1022 | M9185D1004 |  | 220736A |  | 90° | 24 | 25 | 90 | 23 | 1 | 135 ohm | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 3. Modutrol I, II, III Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be**  **Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | **Functional**  **Replacement** | **Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required**  **Accessories** | **Stroke**  **Setting** | **Voltage**  **(Vac)** | **Torque (lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux Sw** | **Control**  **Signal** |
| M965B1030 | M9185D1004 |  | 220736B |  | 160° | 24 | 25 | 160 | 40 | 2 | 135 ohm | None | Reznor Special |
| M975A1006 | M9185D1004 |  |  |  | 160° | 24 | 25 | 160 | 40 |  | 135 ohm | M9185D1004 |  |
| M975A1014 | M9185D1004 |  |  |  | 90° | 24 | 25 | 90 | 23 |  | 135 ohm | M9185D1004 |  |
| M975A1022 | M9185D1004 | 50017460­  003 |  |  | 160° | 120 | 25 | 160 | 40 |  | 135 ohm | M9185D1004 | Requires 50017460-003 |
| M975A1030 | M9185D1004 | 50017460­  003 |  | Q209E | 90° | 120 | 25 | 90 | 23 |  | 135 ohm | None | Trane Special |
| M975A1055 | M9185D1004 | 50017460­  003 |  | Q209E | 160° | 120 | 25 | 160 | 40 |  | 135 ohm | None | Carrier Special |
| M975A1071 | M9185D1004 |  |  |  | 160° | 24 | 25 | 160 | 40 |  | 135 ohm | M9185D1004 |  |
| M975A1089 | M9185D1004 |  |  |  | 160° | 24 | 25 | 160 | 40 |  | 135 ohm | M9185D1004 |  |
| M975A1097 | M9185D1004 | 50017460­  003 |  |  | 160° | 120 | 25 | 160 | 40 |  | 135 ohm | M9185D1004 | Requires 50017460-003 |
| M975B1005 | M9185D1004 |  | 220736B |  | 160° | 24 | 25 | 160 | 40 | 2 | 135 ohm | None |  |
| M975B1013 | M9185D1004 | 50017460­  001 | 220736B |  | 160° | 240 | 25 | 160 | 40 | 2 | 135 ohm | None |  |
| M975B1021 | M9185D1004 | 50017460­  003 | 220736A | Q209E | 90° | 120 | 25 | 90 | 23 | 1 | 135 ohm | None | Trane Special |
| M975B1039 | M9185D1004 | 50017460­  003 | 220736B | Q209E | 160° | 120 | 25 | 160 | 40 | 2 | 135 ohm | None | Carrier Special |
| M975B1047 | M9185D1004 | 50017460­  003 | 220736B |  | 90° | 120 | 25 | 90 | 23 | 2 | 135 ohm | None | Trane Special, aux. switches set at 35° |
| M975B1062 | M9185D1004 | 50017460­  003 | 220736B |  | 90° | 120 | 25 | 90 | 23 | 2 | 135 ohm | None | Reznor Special, aux. switches set at 35° |

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MODUTROL IV™ MOTOR CROSS REFERENCE

MODUTROL IV MOTORS TO MODUTROL IV MOTORS

This section cross references Modutrol IV Motors to Modutrol IV Motors. Please refer to the Application Notes section for specific comments.

Cross Reference Format

Information contained in individual rows refer to the motor listed in the OS # to be Replaced column unless otherwise noted in the Comments column. Following is an example of the format used in this section and explanations of each column.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | **Original Motor Specifications** | | | | | | | | | **Functional Replacement** | **TRADELINE**  **Comments** |
| **Model**  **Number** | **Required Transformer** | **Required**  **Aux. Switch** | **Required Accessories** | **Stroke**  **Setting** | **Aux. Switch Setting** | **Voltage**  **(Vac)** | **Torque**  **(lb-in.)** | **Stroke (degrees)** | **Timing**  **(sec)** | **Aux**  **Sw** | **Motor**  **Shafts** | **Adapt**  **Brack** | **Control**  **Signal** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** |

1. Lists the original motor to be replaced.
2. Lists the Modutrol IV TRADELINE Replacement Motor. This TRADELINE motor may require configuration with the accessories listed in columns 3 through 8.
3. Specifies which internal mount transformer, if any, is required to match the original motor voltage. The transformer choices are:
4. 198162AA - 120/208/240 Vac, 50/60 Hz (multi-tap).
5. 198162EA - 120 Vac, 50/60 Hz.
6. 198162GA - 220 Vac, 50/60 Hz.
7. 198162JA - 24 Vac, 50/60 Hz (isolation).
8. Specifies which field-addable auxiliary switch, if any, is required to match the original motor. The switch kit choices are:
9. 220736A - one spdt switch and mounting bracket.
10. 220736B - two spdt switches and mounting bracket.
11. Specifies which accessory parts or devices, if any, are required to complete the replacement. Items include Weatherproofing Kits, Minimum Position Potentiometers, and linkages. Check the original application to ensure that you account for all modifications of the original motor.
12. Specified stroke setting of the Modutrol IV TRADELINE Motor. 12 of the 14 TRADELINE models have adjustable stroke. The remaining two (M6285A) are fixed stroke. “ADJ” listed here indicates the original motor also had adjustable stroke. Check the application to duplicate the original stroke requirements.
13. Specifies the original motor auxiliary switch setting that was factory set. Check the application to make sure that the original factory stroke setting was not changed in the field. Motors shipped with specific stroke settings have adjustable auxiliary switches, and there is possibility that the original setting was changed.
14. Lists the voltage of the original motor.
15. Lists the torque rating of the original motor.
16. Lists the full stroke rotation of the original motor (closed to open) in angular degrees. Two values with a “-” indicate a range of adjustment available in the field.
17. Lists the timing of the original motor. If two or adjustable stroke is listed in column 10, the time refers to a 160 degree stroke.
18. Lists the number of auxiliary switches, if any in the original motor.
19. Lists number of motor shafts on the original motor. Choices are 1 or 2. All motors have the power end shaft, when listed as 1, the auxiliary end shaft of the original motor is not present.
20. Indicates that a 220738A Adapter Bracket is shipped with the Modutrol IV Motor. Reflects presence as of 1999 date codes. If the original motor used the adapter bracket, it may be reused with the replacement motor. If required for replacement of Modutrol I, II, III or competitive Motors, it must be ordered separately.
21. Lists the control signal of the motor. The listing can specify either an actual value of signal input, or a “Series” designation. Please refer to the Application Notes section in this manual.
22. Lists the functional Modutrol IV Motor replacement. In some cases, the replace­ment will have additional features not found in the original motor. This column may also specify “+” and an accessory. This indicates a minor addition to the functional replacement will provide the functionality required in the application.
23. Comments listed in this column provide additional information to consider when replacing the original motor. Consider differences carefully prior to installation of the Modutrol IV TRADELINE Motor.

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required**  **Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M4172A1006 | M8185D1006 | 50017460-003 |  |  | 60 |  | M4185A1001 |  |
| M4172B1004 | M4185B1058 |  |  |  | 60 | 1 | M4185B1009 |  |
| M4175D1015 | M4185B1058 |  |  |  | 30/60 |  | None |  |
| M4175E1012 | M8185D1006 | 50017460-003 | 220736A |  | 30/60 | 1 | None |  |
| M4182A1004 | M8185D1006 | 50017460-003 |  |  | 60 |  | M4185A1001 |  |
| M4182B1002 | M8185D1006 | 50017460-003 | 220736A |  | 60 | 1 | M4185B1009 |  |
| M4182B1010 | M8185D1006 | 50017460-001 | 220736A |  | 60 | 1 | M4185B1017 |  |
| M4182B1028 | M8185D1006 | 50017460-001 | 220736A |  | 60 | 1 | None |  |
| M4182B1036 | M4185B1009 |  |  |  | 30 | 1 | M4185B1058 |  |
| M4182B1044 | M8185D1006 | 50017460-001 | 220736A |  | 30 | 1 | M4185B1058 |  |
| M4182B1051 | M8185D1006 | 50017460-003 | 220736A | 4074ERU | 30 | 1 | M4185B1058 | With weatherproof kit; Requires 4074ERU |
| M4182B1069 | M8185D1006 | 50017460-003 | 220736A | 4074ERU | 60 | 1 | M4185B1009 |  |
| M4185A1001 | N/A |  |  |  | 60 |  | N/A |  |
| M4185A1019 | M8185D1006 | 50017460-003 |  |  | 67 |  | None |  |
| M4185A1027 | M8185D1006 | 50017460-003 |  |  | 60 |  | M4185A1001 |  |
| M4185B1009 | N/A |  |  |  | 60 | 1 | N/A |  |
| M4185B1017 | M4185B1058 |  |  |  | 60 | 1 | M4185B1017 |  |
| M4185B1025 | M8185D1006 | 50017460-001 | 220736A |  | 60 | 1 | None |  |
| M4185B1033 | M8185D1006 | 50017460-003 | 220736A |  | 60 | 1 | M4185B1009 |  |
| M4185B1041 | M8185D1006 | 50017460-001 | 220736A |  | 60 | 1 | M4185B1017 |  |
| M4185B1058 | N/A |  |  |  | 30 | 1 | N/A |  |
| M4185B1066 | M8185D1006 | 50017460-003 | 220736A |  | 30 | 1 | M4185B1058 |  |
| M4185B1074 | M8185D1006 | 50017460-001 | 220736A |  | 60 | 1 | None |  |
| M4185C1007 | N/A |  |  |  | 30 | 2 | None |  |
| M4185D1013 | M8185D1006 | 50017460-003 |  |  | 30 |  | None |  |
| M4185E1010 | M8185D1006 | 50017460-003 | 220736A |  | 30 | 1 | None |  |
| M4185E4006 | N/A |  |  |  | 30/60 | 1 | None | Canada TRADELINE |
| M4185E4014 | N/A |  |  |  | 30/60 | 1 | None | Canada TRADELINE |
| M4186H1005 | M8185D1006 | 50017460-003 | 220736A |  | 60 | 1 | M4185B1009 | Use auxiliary shaft |

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**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M4186H4009 | M8185D1006 | 50017460-003 | 220736A |  | 60 | 1 | None | Canada, use auxiliary shaft |
| M4186L4000 | M8185D1006 | 50017460-003 | 220736A |  | 30/60 | 1 | None |  |
| M6161A1004 | M6184A1023 |  |  |  | 30 |  | M6184A1015 |  |
| M6161B1002 | M6184D1035 | 50017460-003 | 220736A |  | 30 | 1 | None |  |
| M6174A1009 | M6184D1035 |  |  |  | 60 |  | None | Includes aux. switch cams |
| M6174D1003 | M6184D1035 | 50017460-003 |  |  | 30/60 |  | M6184D1035 |  |
| M6181A1000 | M6184D1035 |  |  |  | 60 |  | None | Less junction box |
| M6181A1018 | M6184A1015 |  |  |  | 60 |  | None |  |
| M6181A1026 | M6184D1035 |  |  |  | 30 |  | M6184A1015 |  |
| M6181A1034 | M6184A1023 |  |  |  | 30 |  | M6184A1023 |  |
| M6181A1042 | M6184D1035 | 50017460-003 |  |  | 60 |  | None |  |
| M6181A1059 | M6184D1035 |  |  |  | 60 |  | None | Carrier |
| M6181D1004 | M6184D1035 |  |  |  | 15/30 |  | M6184D1001 |  |
| M6181F1009 | M6184D1035 |  | 220736B |  | 30/60 | 2 | M6184F1014 |  |
| M6181F1017 | M6184D1035 | 50017460-001 | 220736B |  | 30/60 | 2 | M6184F1014 | Replacement requires 50017460-001 |
| M6182D1003 | None |  |  |  | 15/60 |  | None | Carrier |
| M6182D1011 | None |  |  |  | Select |  | None |  |
| M6182F1008 | None |  |  |  | 15/60 | 2 | None |  |
| M6182F1016 | M6285A1005-S |  |  |  | 30/60 | 2 | None | With weatherproof kit |
| M6184A1007 | M6184D1035 |  |  |  | 60 |  | None |  |
| M6184A1015 | N/A |  |  |  | 30 |  | N/A |  |
| M6184A1023 | N/A |  |  |  | 30 |  | N/A |  |
| M6184A1031 | M6184D1035 |  |  |  | 60 |  | None | Carrier |
| M6184A1049 | M6184D1035 | 50017460-003 |  |  | 30 |  | M6184A1023 |  |
| M6184A1056 | M6184D1035 |  |  |  | 30 |  | None | Trane |
| M6184B1005 | M6184D1035 | 50017460-003 | 220736A |  | 120 | 1 | None |  |
| M6184B1013 | N/A |  |  |  | 120 | 1 | None | Trane |
| M6184B1021 | M6184D1035 |  | 220736A |  | 60 | 1 | M6184F1014 |  |
| M6184D1001 | N/A |  |  |  | 15/30 |  | N/A |  |
| M6184D1035 | N/A |  |  |  | 30/60 |  | N/A | TRADELINE |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M6184D1050 | M6184D1035 |  |  |  | 15/30 |  | M6184D1001 |  |
| M6184D1068 | N/A |  |  |  | 120/240 |  | N/A |  |
| M6184D1076 | M6184D1035 |  |  |  | 30/60 |  | None | Trane |
| M6184F1006 | M6184D1035 |  | 220736B |  | 30/60 | 2 | M6184F1014 |  |
| M6184F1014 | N/A |  |  |  | 30/60 | 2 | N/A |  |
| M6185D1000 | M6285A1005-S |  |  |  | 30/60 |  | None |  |
| M6191A1008 | M6194D1017 | 50017460-003 |  |  | 120 |  | None |  |
| M6191B1006 | M6194D1017 |  | 220736A |  | 60 | 1 | M6194B1011 |  |
| M6191D1002 | M6284D1008-S |  |  |  | 120/240 |  | M6194D1017 |  |
| M6191D1010 | M6194D1017 | 50017460-003 |  |  | 120/240 |  | None | York |
| M6194A1005 | N/A |  |  |  | 120 |  | None | OEM |
| M6194A1021 | M6194D1017 |  |  |  | 120 |  | None | With aux. switch cams |
| M6194B1003 | M6194D1017 |  | 220736A |  | 60 | 1 | M6194B1011 |  |
| M6194B1011 | N/A |  | 220736A |  | 60 | 1 | N/A |  |
| M6194B1029 | N/A |  |  |  | 120 | 1 | N/A | Requires 50017460-003 - Trane |
| M6194B1037 | M6194D1017 | 50017460-003 | 220736A |  | 120 | 1 | None | Trane |
| M6194B1045 | M6194D1017 | 50017460-003 | 220736A |  | 120 | 1 | M6194E1006 | Requires 50017460-003 |
| M6194D1017 | N/A |  |  |  | 120/240 |  | N/A | TRADELINE |
| M6194D1025 | M6194D1017 |  |  |  | 120/240 |  | None | Lennox |
| M6194D1033 | M6194D1017 |  |  |  | 120/240 |  | None | York |
| M6194D1041 | M6194D1017 |  |  | 220741A2-61 | 120/240 |  | None | Japan, includes 220741A |
| M6194D4003 | N/A |  |  |  | 120/240 |  | N/A | Canada TRADELINE |
| M6194E1006 | N/A |  | 220736A |  | 120/240 | 1 | N/A |  |
| M6194E1014 | M6194D1017 |  | 220736A | 4074ERU | 120/240 | 1 | M6194E1006 + 4074ERU | Includes weatherproof kit |
| M6194F1004 | M6194D1017 |  | 220736B |  | 120/240 | 2 | None |  |
| M6281A1009 | M6284D1000-S |  |  |  | 60 |  | M6284A1055-S |  |
| M6281F1008 | M6284D1000-S |  | 220736B |  | 30/60 | 2 | M6284F1013-S |  |
| M6281F1016 | M6284F1062-S | 50017460-003 | 220736B |  | 30/60 | 2 | M6284F1013-S | Requires 50017460-003 |
| M6282A1008 | M6285A1005-S |  |  |  | 60 |  | M6285A1005-S |  |
| M6282A1016 | M6285A1005-S | 50017460-003 |  |  | 30 |  | None | Trane |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M6282A1024 | M6285A1005-S |  |  |  | 60 |  | None |  |
| M6282A1032 | M6285A1005-S | 50017460-003 |  |  | 60 |  | None |  |
| M6282B1006 | M6285A1005-S |  | 220736A |  | 30 | 1 | None |  |
| M6282E1009 | M6282A1009-F |  |  |  | 15/60 | 1 | None | Carrier |
| M6284A1006 | M6284D1000-S |  |  |  | 60 |  | M6284A1055-S |  |
| M6284A1014 | M6284D1000-S | 50017460-003 |  |  | 60 |  | M6284A1055-S |  |
| M6284A1022 | M6284D1000-S | 50017460-003 |  |  | 30 |  | M6284A1055 |  |
| M6284A1030 | M6284A1030-S |  |  |  | 60 |  | None | Japan, includes 220741A |
| M6284A1048 | M6284A1055-S |  |  |  | 60 |  | M6284A1055-S |  |
| M6284A1055 | M6284A1055-S |  |  |  | 30 |  | M6284A1055-S |  |
| M6284A1063 | M6284D1000-S | 50017460-003 |  | 220741A2-62 | 60 |  | M6284A1055-S + 4074ERU | Includes 220741A |
| M6284A1071 | M6284A1071-S |  |  |  | 30 |  | M6284A1071-S |  |
| M6284A1089 | M6284A1089-S |  |  |  | 15 |  | M6284A1089-S |  |
| M6284A1097 | M6284A1097-S |  |  |  | 30 |  | M6284A1097-S |  |
| M6284B1004 | M6284B1004-S |  |  |  | 240 | 1 | None | Trane |
| M6284C1002 | M6284D1000-S |  | 220736B |  | 30 | 2 | M6284F1013-S |  |
| M6284C1010 | M6284C1010-S |  |  |  | 30 | 2 | None | Includes 220741A |
| M6284C1028 | M6284C1028-S |  |  |  | 30 | 2 | None | Japan, includes 220741A |
| M6284C1036 | M6284D1000-S | 50017460-003 | 220736B | 4074ERU | 60 | 2 | None | Includes weatherproof kit |
| M6284C1044 | M6284C1044-S |  |  |  | 30 | 2 | None |  |
| M6284D1000 | M6284D1000-S |  |  |  | 30/60 |  | M6284D1000-S | TRADELINE |
| M6284D1026 | M6284D1026-S |  |  |  | 30/60 |  | None | Includes 220741A |
| M6284D4004 | M6284D4004-S |  |  |  | 30/60 |  | N/A | Canada TRADELINE |
| M6284F1005 | M6284D1000-S |  | 220736B |  | 30/60 | 2 | M6284F1013-S |  |
| M6284F1013 | M6284F1013-S |  | 220736B |  | 30/60 | 2 | N/A |  |
| M6284F1021 | M6284D1000-S | 50017460-003 | 220736B |  | 30/60 | 2 | M6284F1013-S | Requires 50017460-003 |
| M6284F1039 | M6284F1039-S |  |  |  | 30/60 | 2 | N/A | Japan, includes 220741A |
| M6284F1047 | M6284D1000-S | 50017460-003 | 220736B |  | 30/60 | 2 | M6284F1013-S | Requires 50017460-003 |
| M6284F1054 | M6284F1062-S |  |  |  | 30/60 | 2 | None |  |
| M6285A1005 | M6285A1005-S |  |  |  | 60 |  | N/A | TRADELINE |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M6285A1013 | M6285A1005-S |  |  |  | 30 |  | N/A |  |
| M6285A1021 | M6285A1005-S | 50017460-003 |  |  | 30 |  | None |  |
| M6285A1039 | M6285A1039-S |  |  |  | 60 |  | None | Trane |
| M6285A1047 | M6285A1047-S |  |  |  | 60 |  | None | Japan, includes 220741A |
| M6285A1054 | M6285A1054-S |  |  |  | 60 |  | None | Snyder General |
| M6285A4009 | M6285A4009-S |  |  |  | 60 |  | M6285A4009-S | Canada TRADELINE |
| M6285B1003 | M6285A1005-S |  | 220736A |  | 30 | 1 | None |  |
| M6285C1001 | M6285C1001-S |  |  |  | 60 | 2 | M6285C1001-S |  |
| M6286G1001 | M6285A1005-S |  |  |  | 60 |  | M6285A1005-S | Use auxiliary shaft |
| M6286G1019 | M6285A1005-S | 50017460-001 |  |  | 60 |  | None |  |
| M6286G1027 | M6285A1005-S |  |  | 220741A2-62 | 60 |  | M6285A1005-S + 4074ERU | Japan, includes 220741A, use auxiliary shaft |
| M6294A1004 | M6294D1008-S | 50017460-003 |  |  | 240 |  | None |  |
| M6294B1002 | M6294D1008-S |  | 220736A |  | 240 | 1 | None |  |
| M6294B1010 | M6294D1008-S | 50017460-003 | 220736A |  | 240 | 1 | None |  |
| M6294B1028 | M6294D1008-S | 50017460-003 | 220736A |  | 240 | 1 | None | Trane |
| M6294B1036 | M6294B1036-S |  |  |  | 120 | 1 | None |  |
| M6294C1000 | M6294D1008-S | 50017460-003 | 220736B | 220741A | 60 | 2 | None | Includes 220741A |
| M6294D1008 | M6294D1008-S |  |  |  | 120/240 |  | M6294D1008-S |  |
| M7161A1002 | M9164D1009 | 50017460-003 |  | Q7130A1006 | 30 |  | None |  |
| M7161B1000 | M9164D1009 | 50017460-003 | 220736A | Q7130A1006 | 60 | 1 | None |  |
| M7161B1018 | M9164D1009 | 50017460-003 | 220736A | Q7130A1006 | 60 | 1 | None | Trane |
| M7161G1009 | M9164D1009 | 50017460-003 |  | Q7130A1006 | 30 |  | M7164G1030 |  |
| M7161G1017 | M9164D1021 | 50017460-003 |  | Q7130A1006 | 30 |  | None |  |
| M7161G1025 | M9164D1009 |  |  | Q7130A1006 | 60 |  | None |  |
| M7164A1009 | M9164D1009 |  |  | Q7130A1006 | 60 |  | None |  |
| M7164A1017 | N/A |  |  |  | 30 |  | N/A |  |
| M7164A1025 | M9164D1009 |  |  | Q7130A1006 | 30 |  | None | Lennox |
| M7164A1033 | M9164D1009 |  |  | Q7130A1006 | 60 |  | None |  |
| M7164A1041 | M9164D1009 |  |  | Q7130A1006 | 60 |  | None |  |
| M7164A1058 | M9164D1009 | 50017460-001 |  | Q7130A1006 | 30 |  | M7164A1017 |  |

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**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M7164B1007 | M9164D1009 | 50017460-003 | 220736A | Q7130A1006 | 60 | 1 | None |  |
| M7164G1006 | M9164D1009 | 50017460-003 |  | Q7130A1006 | 30 |  | M7164G1030 |  |
| M7164G1014 | M9164D1009 | 50017460-003 |  | Q7130A1006 | 30 |  | None |  |
| M7164G1022 | M9164D1009 |  |  | Q7130A1006 | 60 |  | None |  |
| M7164G1030 | N/A |  |  |  | 30 |  | N/A |  |
| M7183G1003 | M9185D1004 |  |  | Q7130A1006 | 60 |  | N/A | Use auxiliary shaft |
| M7184A1005 | M9184D1021 |  |  | Q7130A1006 | 60 |  | None |  |
| M7184A1013 | None |  |  |  | 30 |  | None |  |
| M7184A1021 | None |  |  |  | 30 |  | None |  |
| M7185A1004 | M9185D1004 |  |  | Q7130A1006 | 60 |  | N/A |  |
| M7186G1000 | M9185D1004 |  |  | Q7130A1006 | 60 |  | N/A | Use auxiliary shaft |
| M7261A1001 | N/A |  |  |  | 60 |  | N/A | Trane |
| M7272A1008 | M9185D1004 | 50017460-003 |  | Q7230A1005 | 30 |  | None |  |
| M7274A1006 | M9174D1007 |  |  | Q7230A1005 | 60 |  | N/A |  |
| M7274G1003 | M9174D1007 |  |  | Q7230A1005 | 60 |  | N/A |  |
| M7281A1007 | M7284A1004 |  |  |  | 30 |  | M7284A1004 | Includes 220741A |
| M7281C1003 | M9184D1021 | 50017460-003 | 220736B | Q7230A1005 | 30 | 2 | M7284C1000 |  |
| M7281C1011 | M9184D1021 | 50017460-003 | 220736B | Q7230A1005 | 60 | 2 | M7284C1018 |  |
| M7281Q1002 | M7284Q1009 |  |  |  | 30 | 2 | M7284Q1009 | Includes 203709D |
| M7282A1006 | M9185D1004 | 50017460-003 |  | Q7230A1005 | 30 |  | M7285A1003 | Includes 220741A |
| M7282A1014 | N/A |  |  |  | 30 |  | N/A | Trane |
| M7282A1022 | N/A |  |  |  | 30 |  | N/A | Trane, with wiring harness |
| M7282B1004 | M9185D1004 | 50017460-003 | 220736A | Q7230A1005 | 30 | 1 | None | Trane |
| M7282B1012 | N/A |  |  |  | 30 | 1 | N/A |  |
| M7282C1002 | M9185D1004 | 50017460-003 | 220736B | Q7230A1005 | 30 | 2 | None |  |
| M7282D1000 | N/A |  |  |  | 15/60 |  | N/A | Carrier, with 205118A |
| M7282D1018 | M7282D1000 | 50017460-001 |  |  | 15/60 |  | None | Carrier |
| M7282F1005 | M7282D1000 |  | 220736B |  | 15/60 | 2 | None | Carrier, 205118A and crank arm |
| M7284A1004 | N/A |  |  |  | 30 |  | N/A | Includes 220741A |
| M7284A1012 | N/A |  |  |  | 60 |  | N/A |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M7284A1020 | M9184D1021 | 50017460-003 |  | Q7230A1005 | 60 |  | M7284A1012 |  |
| M7284A1038 | N/A |  |  |  | 15 |  | N/A |  |
| M7284A1046 | M7284A1004 |  |  |  | 30 |  | M7284A1004 |  |
| M7284A1053 | N/A |  |  |  | 30 |  | N/A | Trane |
| M7284A1061 | M9184D1021 | 50017460-003 |  | Q7230A1005 | 60 |  | None |  |
| M7284A1079 | N/A |  |  |  | 60 |  | N/A |  |
| M7284A1087 | N/A |  |  |  | 30 |  | N/A | Trane |
| M7284C1000 | N/A |  |  |  | 30 | 2 | N/A | Includes 220741A2-72 |
| M7284C1018 | M7284C1000 |  |  |  | 60 | 2 | N/A |  |
| M7284C1026 | M9184D1021 | 50017460-003 | 220736B | Q7230A1005 | 30 | 2 | M7284C1000 | includes 220741A2-72 |
| M7284C1034 | M9184D1021 | 50017460-003 | 220736B | Q7230A1005 | 60 | 2 | M7284C1018 | includes 220741A2-72 |
| M7284C1042 | M9184D1021 |  | 220736B | Q7230A1005 | 30 | 2 | None | International, incl.220741A |
| M7284C1059 | M7284C1083 |  |  |  | 30 | 2 | None | Enhanced |
| M7284C1067 | M7284C1091 |  |  |  | 30 | 2 | None |  |
| M7284G1001 | M9184D1021 |  |  | Q7230A1005 | 60 |  | M7284A1079 |  |
| M7284Q1009 | N/A |  |  |  | 30 | 2 | N/A | Includes 203709D |
| M7284Q1017 | M7284Q1009 |  |  |  | 60 | 2 | None |  |
| M7284Q1025 | M7284Q1009 |  |  |  | 30 |  | None | International, incl.203709D |
| M7284Q1033 | M7284Q1082 |  |  |  | 30 | 2 | None | Enhanced |
| M7284Q1041 | M7284Q1090 |  |  |  | 60 | 2 | None |  |
| M7285A1003 | N/A |  |  |  | 30 |  | N/A | Includes 220741A |
| M7285A1011 | M7285A1003 |  |  |  | 60 |  | None |  |
| M7285A1029 | M9185D1004 |  |  | Q7230A1005 | 60 |  | None |  |
| M7285A1037 | M9185D1004 |  |  | Q7230A1005 | 60 |  | None |  |
| M7285A1045 | N/A |  |  |  | 60 |  | N/A |  |
| M7285A1052 | M9185D1004 |  |  | Q7230A1005 | 30 |  | None |  |
| M7285B1001 | M9185D1004 |  | 220736A | Q7230A1005 | 30 | 1 | None | Trane |
| M7285C1009 | N/A |  |  |  | 30 | 2 | N/A | Includes 220741A |
| M7285C1017 | M7284C1009 |  |  |  | 60 | 2 | None |  |
| M7285C1025 | M9185D1004 |  | 220736B | Q7230A1005 | 60 | 2 | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M7285C1033 | M9185D1004 |  | 220736B | Q7230A1005 | 60 | 2 | None |  |
| M7285Q1008 | N/A |  |  |  | 30 | 2 | N/A | Includes 203709D |
| M7285Q1016 | M7285Q1008 |  |  |  | 60 | 2 | N/A |  |
| M7286G1009 | N/A |  |  |  | 60 |  | N/A |  |
| M7294A1002 | M9194D1003 | 50017460-003 |  | Q7230A1005 | 60 |  | M7294Q1007 | Includes 220741A |
| M7294A1010 | N/A |  |  |  | 120 |  | N/A |  |
| M7294G1009 | M7294A1010 |  |  |  | 120 |  | None |  |
| M7294Q1007 | N/A |  |  |  | 60 | 2 | N/A | Includes 203709D |
| M7361A1000 | M9164D1009 | 50017460-003 |  | Q7330A1004 | 30 |  | None |  |
| M7361A1018 | None |  |  |  | 60 |  | None | Liebert, with 203709B |
| M7364A1007 | M9164D1009 | 50017460-003 |  | Q7330A1004 | 60 |  | None |  |
| M7364A1015 | M9164D1009 | 50017460-003 |  | Q7330A1004 | 30 |  | None |  |
| M7364A1023 | M9164D1009 |  |  | Q7330A1004 | 60 |  | None |  |
| M7364A1031 | M9164A1070 | 50017460-001 |  | Q7330A1004 | 60 |  | None | Liebert |
| M7381A1006 | None |  |  |  | 60 |  | None | Liebert, with 203709B board |
| M7382A1005 | None |  |  |  | 60 |  | None | Liebert |
| M7384A1003 | M9184D1021 |  |  | Q7330A1004 | 60 |  | None |  |
| M7384A1011 | M9184D1021 |  |  | Q7330A1004 | 30 |  | None |  |
| M7384A1029 | None |  |  |  | 60 |  | None | Liebert |
| M7385A1002 | M9185D1004 |  |  | Q7330A1004 | 30 |  | None |  |
| M7385A1010 | M9185D1004 | 50017460-003 |  | Q7330A1004 | 60 |  | None | Includes isolation transformer |
| M7385A1028 | M9185D1004 | 50017460-003 |  | Q7330A1004 | 60 |  | None |  |
| M7385A1036 | M9185D1004 |  |  | Q7330A1004 | 60 |  | None |  |
| M7385A1044 | M9185A1018 | 50017460-001 |  | Q7330A1004 | 60 |  | None | Liebert |
| M7484A1002 | None |  |  |  | 30 |  | None | Cleaver Brooks |
| M7484A1010 | None |  |  |  | 30 |  | None |  |
| M7675A1001 | M9185D1004 |  |  | Q7630A1001 | 60 |  | None |  |
| M7675A1019 | M9185D1004 | 50017460-003 |  | Q7630A1001 | 30 |  | None | Trane |
| M7675G1008 | M9185D1004 |  |  | Q7630A1001 | 60 |  | None |  |
| M7682A1010 | M9185D1004 |  |  | Q7630A1001 | 60 |  | None | Includes Q209F1001 |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M7685A1009 | M9185D1004 |  |  | Q7630A1001 | 60 |  | None |  |
| M7685A1017 | M9185D1004 |  |  | Q7630A1001 | 30 |  | None |  |
| M7685A1025 | M9185D1004 |  |  | Q7630A1001 | 30 |  | None |  |
| M7685A1033 | M9185D1004 | 50017460-003 |  | Q7630A1001 | 60 |  | None | York |
| M7685A1041 | M9185D1004 |  |  | Q7630A1001 | 30 |  | None | Lennox |
| M7685G1006 | M9185D1004 |  |  | Q7630A1001 | 30 |  | None |  |
| M7964A1001 | None |  |  |  | 30 |  | None |  |
| M7964B1009 | None |  |  |  | 30 |  | None | Nesbitt ITT |
| M7964B1017 | None |  |  |  | 60 |  | None |  |
| M7964C1007 | None |  |  |  | 30 |  | None |  |
| M7964C1015 | None |  |  |  | 30 |  | None |  |
| M7964D1005 | None |  |  |  | 60 |  | None |  |
| M7964D1013 | None |  |  |  | 60 |  | None |  |
| M7975E1009 | None |  |  |  | 30 |  | None |  |
| M7975E1017 | None |  |  |  | 30 |  | None |  |
| M7983G1005 | None |  |  |  | 60 |  | None | IBM |
| M7984D1001 | None |  |  |  | 60 |  | None | Includes 220741A |
| M7984N1008 | None |  |  |  | 30 |  | None |  |
| M7985D1000 | None |  |  |  | 60 |  | None |  |
| M8175B1002 | M8185D1006 |  | 220736A |  | 60 | 1 | None |  |
| M8182A1005 | M8185D1006 |  |  |  | 60 |  | M8185A1002 |  |
| M8182B1003 | M8185D1006 |  | 220736A |  | 60 | 1 | None |  |
| M8182B1011 | M8185D1006 |  | 220736A | 4074ERU | 60 | 1 | None | Includes weatherproof kit |
| M8185A1002 | M8185D1006 |  |  |  | 60 |  | M8185A1002 |  |
| M8185A1010 | M8185D1006 |  |  |  | 60 |  | M8185D1006 |  |
| M8185A1028 | None |  |  |  | 60 |  | None |  |
| M8185B1000 | M8185D1006 |  | 220736A |  | 60 | 1 | None |  |
| M8185B1018 | M8185D1006 |  |  |  | 60 | 1 | M8185D1006 |  |
| M8185B1026 | None |  |  |  | 60 | 1 | None |  |
| M8185B1034 | M8185D1006 |  | 220736A |  | 60 | 1 | None |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M8185D1006 | N/A |  |  |  | 30/60 |  | N/A | TRADELINE |
| M8186G1008 | M8185D1006 |  |  |  | 60 |  | None | Includes aux. switch cams, use aux. shaft |
| M9161A1008 | M9164D1009 | 50017460-003 |  |  | 60 |  | M9164A1005 |  |
| M9161A1016 | M9164D1009 |  |  |  | 60 |  | M9164A1005 | Wire to 24 Vac |
| M9161A1024 | M9164A1005 |  |  |  | 30 |  | None |  |
| M9161A1032 | M9164A1005 |  |  |  | 60 |  | None | Carrier |
| M9161A1040 | M9164D1009 | 50017460-003 |  | 4074ERU | 30 |  | M9164A1005 + 4074ERU | Includes weatherproof kit |
| M9161C1004 | M9164C1001 |  | 220736B |  | 60 | 2 | M9164C1068 | Wire to 24 Vac |
| M9161C1012 | M9164C1068 |  |  |  | 30 | 2 | None |  |
| M9161V1009 | N/A |  |  |  | 60 |  | N/A | Carrier |
| M9164A1005 | N/A |  |  |  | 30 |  | N/A |  |
| M9164A1013 | N/A |  |  |  | 60 |  | N/A |  |
| M9164A1021 | M9164A1005 |  |  |  | 60 |  | M9164A1005 |  |
| M9164A1039 | M9164D1009 | 50017460-003 |  |  | 60 |  | M9164A1005 |  |
| M9164A1047 | M9164D1009 | 50017460-001 |  |  | 60 |  | M9164A1013 |  |
| M9164A1054 | M9164D1009 | 50017460-003 |  |  | 30 |  | M9164A1005 |  |
| M9164A1062 | M9164D1009 |  |  |  | 30 |  | M9164A1005 | Wire to 24 Vac |
| M9164A1070 | N/A |  |  |  | 60 |  | N/A |  |
| M9164A1088 | M9164A1013 |  |  |  | 60 |  | None |  |
| M9164A1096 | M9164D1009 | 50017460-003 |  |  | 60 |  | M9164A1005 |  |
| M9164A1104 | M9164D1009 | 50017460-003 |  |  | 60 |  | None | Carrier |
| M9164A1112 | M9164D1009 | 50017460-001 |  |  | 30 |  | None | York |
| M9164A1120 | M9164D1009 |  |  |  | 30 |  | M9164A1005 | Wire to 24 Vac |
| M9164A1138 | M9164D1009 | 50017460-003 |  |  | 60 |  | None | Carrier |
| M9164B1003 | M9164D1009 | 50017460-003 | 220736A |  | 30 | 1 | M9164C1068 |  |
| M9164C1001 | N/A |  |  |  | 60 | 2 | N/A | Wire to 24 Vac |
| M9164C1019 | M9164D1009 | 50017460-003 | 220736B |  | 60 | 2 | M9164C1068 |  |
| M9164C1027 | M9164D1009 | 50017460-001 | 220736B |  | 60 | 2 | None |  |
| M9164C1035 | M9164D1009 | 50017460-003 | 220736B |  | 30 | 2 | M9164C1068 |  |
| M9164C1043 | M9164D1009 | 50017460-003 | 220736B |  | 60 | 2 | M9164C1068 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M9164C1050 | M9164C1068 |  |  |  | 60 | 2 |  |  |
| M9164C1068 | N/A |  |  |  | 30 | 2 | N/A |  |
| M9164D1009 | N/A |  |  |  | 30/60 |  | N/A | TRADELINE |
| M9164V1006 | N/A |  |  |  | 60 |  | N/A | Carrier |
| M9164V1014 | M9164D1009 |  |  |  | 60 |  | None |  |
| M9164V1022 | M9164D1009 |  |  | Q209E1010 | 60 |  | None | Carrier, with Q209E, crank arm |
| M9171A1006 | M9174B1027 | 50017460-003 |  |  | 60 |  | M9174B1027 |  |
| M9171B1004 | M9184D1021 | 50017460-003 | 220736A |  | 60 | 1 | M9174B1027 |  |
| M9171B1012 | M9174D1007 | 50017460-003 | 220736A |  | 30 | 1 | M9174B1027 |  |
| M9171B1020 | None |  |  |  | 30 | 1 | None | Cleaver Brooks |
| M9171C1002 | M9174C1025 |  | 22036B |  | 30 | 2 | M9174C1025 |  |
| M9171C1010 | M9174D1007 | 50017460-003 | 220736B |  | 30 | 2 | 9174C1041 | Cleaver Brooks |
| M9172A1005 | M9185D1004 |  |  |  | 60 |  | None |  |
| M9172A1013 | M9185D1004 |  |  |  | 60 |  | None |  |
| M9172A1021 | M9185D1004 |  |  |  | 60 |  | None | Carrier |
| M9172C1001 | M9185D1004 |  | 220736B |  | 60 | 2 | None | Reznor |
| M9172W1004 | M9185D1004 | 50017460-003 | 220736A | Q209E1010 | 30 | 1 | None | Trane, with Q209E1010 |
| M9172W1012 | N/A |  |  |  | 60 | 1 | N/A | Carrier |
| M9174B1001 | M9174D1007 | 50017460-003 | 220736A |  | 60 | 1 | M9174B1027 |  |
| M9174B1019 | M9174D1007 | 50017460-003 | 220736A |  | 30 | 1 | M9174B1027 | Requires 220738A |
| M9174B1027 | N/A |  |  |  | 30 | 1 | N/A |  |
| M9174B1035 | M9184D1021 | 50017460-003 | 220736A |  | 30 | 1 | None | Cleaver Brooks |
| M9174B1043 | M9174B1027 |  |  |  | 60 | 1 | M9174B1027 |  |
| M9174C1009 | M9174D1007 | 50017460-003 | 220736B |  | 60 | 2 | M9174C1033 |  |
| M9174C1017 | M9174D1007 | 50017460-003 | 220736B |  | 30 | 2 | M9174C1025 |  |
| M9174C1025 | N/A |  |  |  | 30 | 2 | N/A |  |
| M9174C1033 | N/A |  |  |  | 60 | 2 | N/A |  |
| M9174C1041 | N/A |  |  |  | 30 | 2 | None | Cleaver Brooks |
| M9174D1007 | N/A |  |  |  | 30/60 |  | N/A | TRADELINE |
| M9175A1002 | M9185D1004 |  |  |  | 60 |  | None |  |

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**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M9175A1010 | M9185A1018 |  |  | 221455A | 30 |  | None | Includes crank arm |
| M9175A1028 | M9185D1004 |  |  |  | 60 |  | None |  |
| M9175A1036 | M9185D1004 | 50017460-003 |  |  | 30 |  | None | York |
| M9175A1044 | M9185D1004 | 50017460-003 |  |  | 30 |  | None |  |
| M9175A1051 | M9185A1018 |  |  |  | 30 |  | None |  |
| M9175A1069 | M9185D1004 |  |  |  | 60 |  | None | Carrier |
| M9175A1077 | M9185D1004 |  |  |  | 30 |  | None | Trane |
| M9175B1000 | N/A |  |  |  | 30 | 1 | N/A |  |
| M9175C1008 | M9185D1004 | 50017460-003 | 220736A |  | 30 | 2 | None | Reznor |
| M9175D1006 | M9185A1018 | 50017460-003 |  |  | 30/60 |  | M9185D1004 | Requires 50017460-003 |
| M9175D1014 | M9185D1004 |  |  |  | 30/60 |  | M9185D1004 | TRADELINE |
| M9175V1003 | M9185D1004 | 50017460-003 |  |  | 30 |  | None | Trane |
| M9175V1011 | None |  |  |  | 60 |  | None | Carrier, leadwires |
| M9175W1001 | M9185D1004 | 50017460-003 | 220736A |  | 60 | 1 | None | Carrier |
| M9175W1019 | M9185D1004 | 50017460-003 | 220736A |  | 30 | 1 | None | Trane |
| M9175Y1007 | M9185D1004 | 50017460-003 | 220736B |  | 30 | 2 | None |  |
| M9181A1004 | M9184D1021 |  |  |  | 60 |  | M9184A1019 |  |
| M9181A1012 | M9184A1019 |  |  |  | 60 |  | None |  |
| M9181A1020 | M9184D1021 |  |  |  | 60 |  | M9184A1019 |  |
| M9181A1038 | M9184D1021 |  |  |  | 30 |  | M9184A1035 |  |
| M9181B1002 | M9184D1021 |  | 220736A |  | 30 | 1 | M9184C1031 |  |
| M9181B1010 | M9184D1021 |  | 220736A |  | 60 | 1 | None |  |
| M9181B1028 | None |  |  |  | 30 | 1 | None | Cleaver Brooks |
| M9181C1000 | None |  |  |  | 30 | 2 | None |  |
| M9181D1008 | M9184D1021 |  |  |  | 15/30 |  | M9184D1005 |  |
| M9181D1016 | N/A |  |  |  | 120/240 |  | N/A | Trane |
| M9181D1024 | None |  |  |  | 60/120/  240 |  | None | Special Timing |
| M9182A1003 | M9185D1004 |  |  |  | 60 |  | M9185A1018 | Less junction box |
| M9182A1011 | N/A |  |  |  | 60 |  | N/A |  |

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**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M9182A1029 | M9185A1018 |  |  |  | 30 |  | None |  |
| M9182A1037 | M9185D1004 | 50017460-003 |  |  | 30 |  | None | Trane |
| M9182A1045 | M9185D1004 |  |  |  | 60 |  | M9185A1018 |  |
| M9182A1052 | M9185D1004 |  |  | 4074ERU | 60 |  | M9185A1018 + 4074ERU | Includes weatherproof kit |
| M9182A1060 | M9185D1004 | 50017460-003 |  |  | 30 |  | None | York |
| M9182C1009 | M9185C1006 |  |  |  | 60 | 2 | None |  |
| M9182C1017 | M9185D1004 |  | 220736B |  | 30 | 2 | None |  |
| M9182D1007 | M9185D1004 |  |  |  | 30/60 |  | M9185D1004 | Less junction box |
| M9182D1015 | M9185D1004 |  |  |  | 30/60 |  | M9185D1004 |  |
| M9182D1023 | N/A |  |  |  | 60/120/  240 |  | N/A | Special Timing |
| M9182D1031 | M9185D1004 | 50017460-001 |  | Q209E1010 | 30/60 |  | None | Includes Q209E |
| M9182D4001 | M9185D4008 |  |  |  | 30/60 |  | M9185D1004 | Canada |
| M9182W1002 | M9185D1004 | 50017460-003 | 220736A | Q209E1010 | 30 | 1 | None | Trane, includes Q209E |
| M9183G1009 | M9185D1004 |  |  |  | 60 |  | M9185A1018 | Use auxiliary shaft |
| M9184A1001 | M9184D1021 |  |  |  | 60 |  | M9184A1019 |  |
| M9184A1019 | N/A |  |  |  | 60 |  | N/A |  |
| M9184A1027 | M9184D1021 |  |  |  | 30 |  | M9184A1035 |  |
| M9184A1035 | M9184D1021 |  |  |  | 30 |  | M9184A1019 |  |
| M9184A1043 | M9184D1021 |  |  | 220741A2-90 | 60 |  | M9184A1019 | Japan; replacement requires 220741A |
| M9184B1009 | N/A |  |  |  | 30 | 1 | N/A | Cleaver Brooks |
| M9184B1017 | N/A |  |  |  | 30 | 1 | N/A |  |
| M9184B1025 | N/A |  |  |  | 30 | 1 | N/A | Cleaver Brooks |
| M9184B1033 | M9184D1021 |  | 220736A |  | 60 | 1 | M9184F1034 | With tapped shaft |
| M9184B1041 | M9184D1021 |  | 220736A | 4074ERU | 30 | 1 | M9184C1031 | Includes weatherproof kit |
| M9184C1007 | M9184D1021 |  | 220736B |  | 30 | 2 | M9184C1031 | With tapped shaft |
| M9184C1015 | M9184D1021 |  | 220736B |  | 60 | 2 | None |  |
| M9184C1023 | N/A |  |  |  | 30 | 2 | N/A | Cleaver Brooks |
| M9184C1031 | N/A |  |  |  | 30 | 2 | N/A | With tapped shaft |
| M9184C1049 | N/A |  |  |  | 30 | 2 | N/A | Cleaver Brooks |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M9184D1005 | N/A |  |  |  | 15/30 |  | N/A |  |
| M9184D1013 | M9184D1021 |  |  |  | 30/60 |  | none | TRADELINE |
| M9184D1021 | N/A |  |  |  | 30/60 |  | N/A | TRADELINE, with tapped shaft |
| M9184D1039 | M9184D1021 |  |  | 220741A2-90 | 15/30 |  | M9184D1005 | Japan; replacement requires 220741A |
| M9184D1047 | M9184D1021 |  |  |  | 15/30 |  | M9184D1005 |  |
| M9184D1054 | M9194D1003 |  |  |  | 120/240 |  | None |  |
| M9184D1062 | M9184D1021 |  |  |  | 30/60 |  | M9184D1021 |  |
| M9184D4009 | N/A |  |  |  | 30/60 |  | N/A | Canada, TRADELINE |
| M9184E4006 | N/A |  | 220736A |  | 30/60 | 1 | None | Canada, TRADELINE, tapped shaft |
| M9184F1000 | M9184F1034 |  |  |  | 30/60 | 2 | None |  |
| M9184F1018 | M9184D1021 |  | 220736B |  | 30/60 | 2 | M9184F1034 | With tapped shaft |
| M9184F1026 | M9184D1021 |  | 220736B | 220741A2-90 | 30/60 | 2 | M9184F1034 | Requires 220741A |
| M9184F1034 | N/A |  | 220736B |  | 30/60 | 2 | N/A | With tapped shaft |
| M9185A1000 | M9185D1004 |  |  |  | 60 |  | M9185A1018 |  |
| M9185A1018 | N/A |  |  |  | 60 |  | N/A |  |
| M9185A1026 | M9185A1018 |  |  |  | 30 |  | None |  |
| M9185A1034 | M9185D1004 |  |  |  | 60 |  | M9185A1018 |  |
| M9185A1042 | M9185D1004 | 50017460-003 |  |  | 30 |  | M9185A1026 | Requires 50017460-003 |
| M9185A1059 | M9185D1004 |  |  |  | 30 |  | None | Lennox |
| M9185A1067 | M9185D1004 |  |  |  | 30 |  | None | York |
| M9185A1075 | N/A |  |  | 220741A | 60 |  | N/A | Requires 220741A |
| M9185A1083 | M9185D1004 |  |  |  | 60 |  | M9185A1018 |  |
| M9185A1091 | M9185D1004 |  |  |  | 30 |  | M9185A1018 | Less junction box |
| M9185B1008 | M9185D1004 | 50017460-003 | 220736A |  | 30 | 1 | None |  |
| M9185C1006 | N/A |  | 220736B |  | 60 | 2 | N/A |  |
| M9185C1014 | M9185D1004 |  | 220736B |  | 60 | 2 | None |  |
| M9185C1022 | M9185D1004 |  | 220736B |  | 60 | 2 | None |  |
| M9185D1004 | N/A |  |  |  | 30/60 |  | N/A | TRADELINE |
| M9185D1012 | M9185D1004 |  |  |  | 30/60 |  | M9185D1004 |  |
| M9185D4008 | N/A |  |  |  | 30/60 |  | N/A | Canada, TRADELINE |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M9185E1001 | M9185D1004 |  | 220736A |  | 30/60 | 1 | M9185E1019 |  |
| M9185E1019 | N/A |  |  |  | 30/60 | 1 | N/A |  |
| M9185E4005 | N/A |  | 220736A |  | 30/60 | 1 | N/A | Canada, TRADELINE, tapped shaft |
| M9185F1009 | None |  |  |  | 30/60 | 2 | None | Carrier (W957G1006) |
| M9185W1017 | M9185D1004 | 50017460-003 | 220736A | Q209E1010 | 30 | 1 | None | Trane, with Q209E |
| M9186G1006 | M9185A1018 |  |  |  | 60 |  | None | Use auxiliary shaft |
| M9186G1014 | M9185D1004 |  |  | 220741A2-90 | 60 |  | M9185A1018 | Japan, use auxiliary shaft |
| M9186G4000 | M9185E4005 |  |  |  | 60 |  | None | Canada, use auxiliary shaft |
| M9191D1006 | M9194D1003 |  |  |  | 120/240 |  | M9194D1003 |  |
| M9191F1001 | N/A |  | 220736B |  | 120/240 | 2 | N/A |  |
| M9194C1005 | N/A |  |  |  | 60 | 2 | N/A |  |
| M9194D1003 | N/A |  |  |  | 120/240 |  | N/A | TRADELINE |
| M9194D4007 | M9194D1003 |  |  |  | 120/240 |  | None | Canada, TRADELINE |
| M9194E1000 | N/A |  |  |  | 120/240 | 1 | N/A |  |
| M9481D1005 | M9484F1007 |  |  |  | 30/60 |  | M9484D1010 |  |
| M9481E1002 | M9484F1007 |  |  |  | 30/60 | 1 | M9484E1017 |  |
| M9481F1000 | M9484F1007 |  |  |  | 30/60 | 2 | None |  |
| M9484D1002 | None |  |  |  | 15/30 |  | M9484D1010 |  |
| M9484D1010 | N/A |  |  |  | 30/60 |  | N/A | With tapped shaft |
| M9484D1028 | none |  |  |  | 30/60 |  | M9484D1010 |  |
| M9484D1036 | None |  |  |  | 15/30 |  | M9484E1009 |  |
| M9484D1044 | None |  |  |  | 30/60 |  | M9484D1010 | With tapped shaft |
| M9484D1051 | None |  |  |  | 30/60 |  | M9484D1010 |  |
| M9484D4006 | N/A |  |  |  | 30/60 |  | N/A | Canada, tapped shaft, 220741A |
| M9484E1009 | N/A |  |  |  | 15/30 | 1 | N/A | With tapped shaft |
| M9484E1017 | N/A |  |  |  | 30/60 | 1 | N/A |  |
| M9484E1025 | None |  |  |  | 30/60 | 1 | M9484E1033 |  |
| M9484E1033 | N/A |  |  |  | 30/60 | 1 | N/A |  |
| M9484E1041 | None |  |  |  | 30/60 | 1 | M9484E1033 | With 221455A |
| M9484E1058 | None |  |  |  | 30/60 | 1 | M9484E1033 |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

**Table 4. Modutrol IV Cross Reference to Modutrol IV.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OS # to be Replaced** | **Modutrol IV TRADELINE Replacement Specifications** | | | | | | **Functional Replacement** | **TRADELINE Comments** |
| **Model Number** | **Required Transformer** | **Required Aux. Switch** | **Required Accessories** | **Timing**  **(sec)** | **Aux Sw** |
| M9484E1066 | None |  |  |  | 30/60 | 1 | M9484E1033 |  |
| M9484E1074 | None |  |  |  | 30/60 | 1 | M9484E1033 |  |
| M9484E1082 | None |  |  |  | 30/60 | 1 | M9484E1017 | With tapped shaft |
| M9484E1090 | None |  |  |  | 30/60 | 1 | M9484E1017 |  |
| M9484E1116 | None |  |  |  | 15/30 | 1 | M9484E1009 |  |
| M9484E4003 | N/A |  |  |  | 30/60 | 1 | N/A | Canada, tapped shaft, 220741A |
| M9484F1007 | N/A |  |  |  | 30/60 | 2 | N/A |  |
| M9484F1015 | None |  |  |  | 30/60 | 2 | M9484F1007 |  |
| M9484F1023 | N/A |  |  |  | 15/30 | 2 | N/A | With tapped shaft |
| M9484F1031 | N/A |  |  |  | 30/60 | 2 | N/A |  |
| M9484F1049 | N/A |  |  |  | 30/60 | 2 | N/A |  |
| M9484F1056 | None |  |  |  | 15/30 | 2 | M9484F1023 | With tapped shaft |
| M9484F1064 | None |  |  |  | 30/60 | 2 | M9484F1031 |  |
| M9484F1072 | None |  |  |  | 30/60 | 2 | M9484F1007 |  |
| M9484F4001 | N/A |  |  |  | 30/60 | 2 | N/A | Canada, tapped shaft, 220741A |
| M9484F4019 | N/A |  |  |  | 15/30 | 2 | N/A |  |
| M9491D1003 | None |  |  |  | 60/120 |  | M9494D1000 |  |
| M9494D1000 | N/A |  |  |  | 60/120 |  | N/A |  |

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MODUTROL IV™ MOTOR CROSS REFERENCE

MODUTROL IV ACCESSORIES

This section cross-references accessory parts for all Modutrol Motors. It provides detailed data about accessories. See the Application Notes section for details.

Cross Reference Format

Information contained in individual rows refers to the motor listed in the Accessory Part Number column unless otherwise noted. Following is an example of the format used in this section and explanations of each column.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Accessory Part Number** | **For Use With** | **Description** | **Works with Mod** | | **Mod IV**  **Equivalent** | **Comments** |
| **III** | **IV** |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. The part number of the accessory to be replaced. NOTE: Not all Modutrol IV equivalents work with pre-Modutrol IV Motors. Cross-
2. Accessory name and basic function. check the selected part to ensure proper operation in your application.
3. Original use of or applications for the device.
4. Whether or not the original accessory works with a Modutrol III Motor. **7.** Additional information to consider when replacing an accessory. This column
5. Whether or not the original accessory works with a Modutrol IV Motor. indicates special handling that is required. Consider differences carefully.
6. The Modutrol IV equivalent for use with Mod IV Motors.

**Table 5. Modutrol Motor Accessory Cross Reference.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Accessory Part Number** | **Description** | **Mod IV Equivalent** | **Comments** |
| 27518 | Ball Joint | N/A |  |
| 101662A | Bracket, external damper mount | 101662A |  |
| 104643A | Crank Arm Adapter | 104643A | Requires 220738A for Mod III to Mod IV |
| 112894FB | Remote Manual Potentiometer, 270 ohm | 112894FA |  |
| 112894FD | Remote Manual Potentiometer, 135 ohm | 112894FD |  |
| 112894FE | Remote Manual Potentiometer, 270 ohm, with wallplate | 112894FE |  |
| 112894GB | Remote Manual Potentiometer, 72 ohm | 112894FE |  |
| 198162AA | Internal Transformer, 120/208/240 Vac, 50/60 Hz | 50017460-001 |  |
| 198162EA | Internal Transformer, 120 Vac, 50/60 Hz | 50017460-003 |  |
| 198162GA | Internal Transformer, 220 Vac, 50/60 Hz | 50017460-001 |  |
| 198162JA | Internal Transformer, 24 Vac, 50/60 Hz, Isolation | 50017460-001 |  |
| 220736A | Auxiliary Switch Kit, 1 Switch | 220736A |  |
| 220736B | Auxiliary Switch Kit, 2 Switches | 220736B |  |
| 203977A | Economizer Adapter Kit | 203977A |  |
| 220738A | Adapter Bracket | 220738A |  |

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**Table 5. Modutrol Motor Accessory Cross Reference.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Accessory Part Number** | **Description** | **Mod IV Equivalent** | **Comments** |
| 220741A | Screw Terminal Adapter | 220741A2-XX | order by Mod Motor series number |
| 221455A | Infinitely Adjustable Crank Arm | 221455A |  |
| 221508A | Resistor Board | 221508A2 |  |
| 34343A | Connecting Rod | Q5001D1000 |  |
| 4074BYK | Resistor Kit - Series 90 | 221508A2 |  |
| 4074EAU | Resistor Kit - W973 | 221508A2 |  |
| 4074EDC | Resistor Kit - 4 to 20 mA | 221508A2 |  |
| 4074EED | Resistor Kit - 4 to 20 mA | 221508A2 |  |
| 4074ELR | Heavy Duty Crank Arm | 4074ELR | Requires 220738A for Mod IV |
| 4074ELY | Infinitely Adjustable Crank Arm | 221455A |  |
| 4074ERU | Weatherproof Kit | 4074ERU |  |
| 4074EQE | Heavy Duty Crank Arm | 4074EQE |  |
| None | Economizer Weatherproof Kit | None |  |
| 7616BR | Adjustable Crank Arm | 7617ADW | Requires 220738A for Mod IV |
| 7617ADW | Adjustable Crank Arm | 7617ADW |  |
| 7617DM | Coupling | 7617DM |  |
| None | Bracket, DR/ZR valve to Mod Motor | None |  |
| ES-650-117 | Explosion Proof Housing EGS Enclosures | ES-650-117 | Requires 220738A for Mod IV |
| ES-650-118 | Explosion Proof Housing EGS Enclosures | ES-650-118 |  |
| None | Valve Linkage | None |  |
| Q100A1015 | Valve Linkage | Q100A1015 |  |
| Q100A1023 | Valve Linkage | Q100A1023 |  |
| Q181A1007 | Auxiliary Potentiometer (1 Potentiometer) | Q181A1007 |  |
| Q181A1015 | Auxiliary Potentiometer (2 Potentiometer) | Q181A1015 |  |
| Q181A1064 | Auxiliary Potentiometer (3 Potentiometer) | Q181A1064 |  |
| Q181A1072 | Auxiliary Potentiometer (4 Potentiometer) | Q181A1072 |  |
| Q209E1002 | Cover Mounted Minimum Position Pot 135 ohm | Q209E1002 |  |
| Q209E1010 | Cover Mounted Minimum Position Pot 270 ohm | Q209E1010 |  |
| Q209F1001 | Internal Minimum Position Pot 135 ohm | Q209F1001 |  |
| Q209F1019 | Internal Minimum Position Pot 270 ohm | Q209F1019 |  |
| Q5001A1006 | V5011, V5013 Valves | Q5001A1006 |  |
| Q5001A1014 | V5011, V5013 Valves | Q5001A1014 |  |

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**Table 5. Modutrol Motor Accessory Cross Reference.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Accessory Part Number** | **Description** | **Mod IV Equivalent** | **Comments** |
| None | V5011, V5013 Valves | None |  |
| None | V5011, V5013 Valves | None |  |
| None | V5011, V5013 Valves | non |  |
| Q5001D1000 | V5011, V5013 Valves | Q5001D1000 |  |
| Q5001D1018 | V5011, V5013 Valves | Q5001D1018 |  |
| Q5001D1026 | V5011, V5013 Valves | Q5001D1026 |  |
| None | Series 90 Motors | None |  |
| None | Series 90 Motors | None |  |
| None | Series 90 Motors | None |  |
| Q7130A1006 | Series 90 Motors | Q7130A1006 |  |
| Q7230A1005 | Series 90 Motors | Q7230A1005 |  |
| Q7330A1004 | Series 90 Motors | Q7330A1004 |  |
| Q7630A1001 | Series 90 Motors | Q7630A1001 |  |
| S443A1007 | Remote mount Series 90 motor manual control | S443A1007 |  |
| S963B1128 | Series 90 Motors | S963B1128 |  |
| S963B1136 | Series 90 Motors | S963B1136 |  |
| W859 | Series 90 Mod III | W859 | Requires 220738A for Mod IV |
| W859 | Series 90 Mod IV | W859 |  |

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