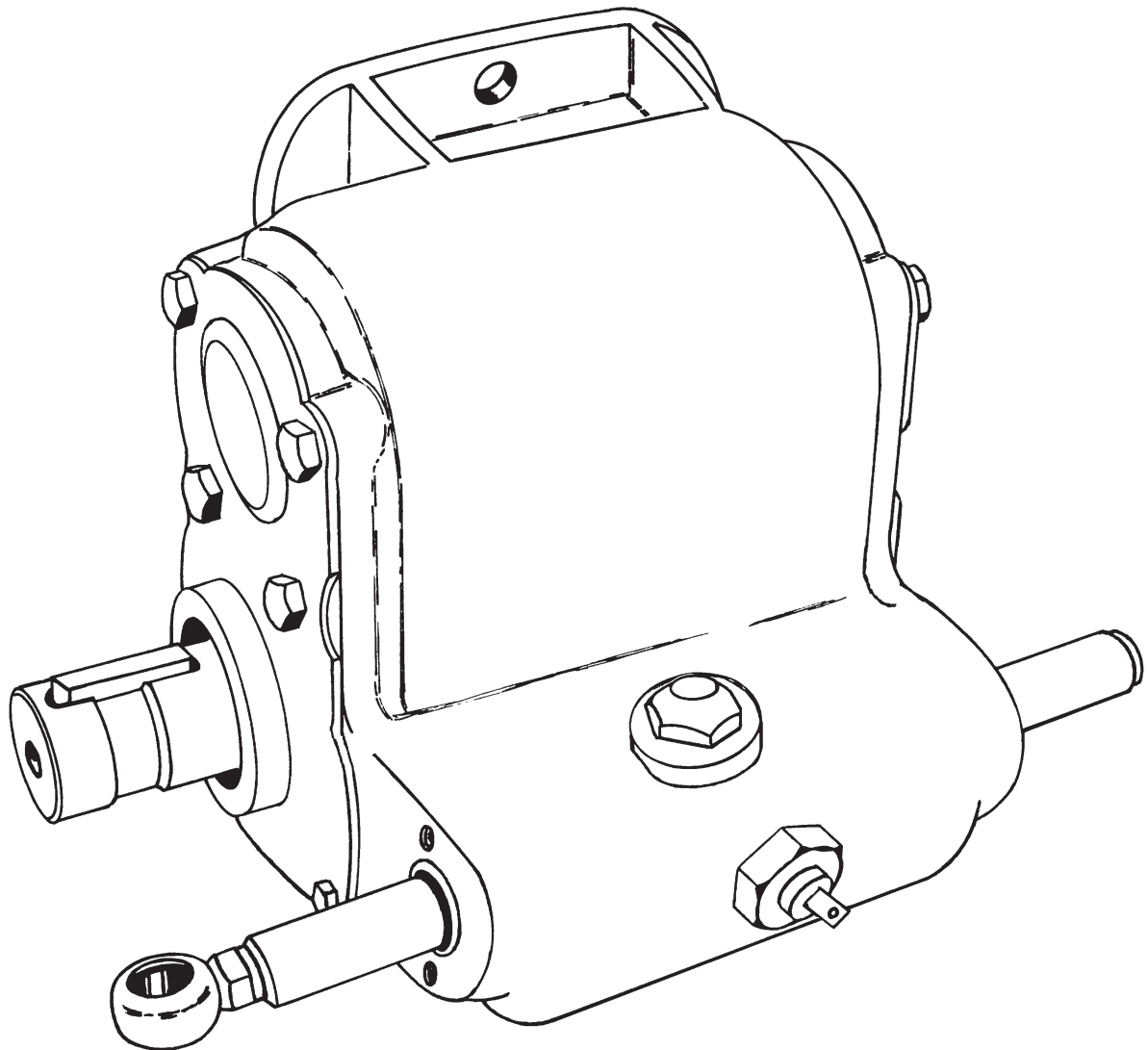




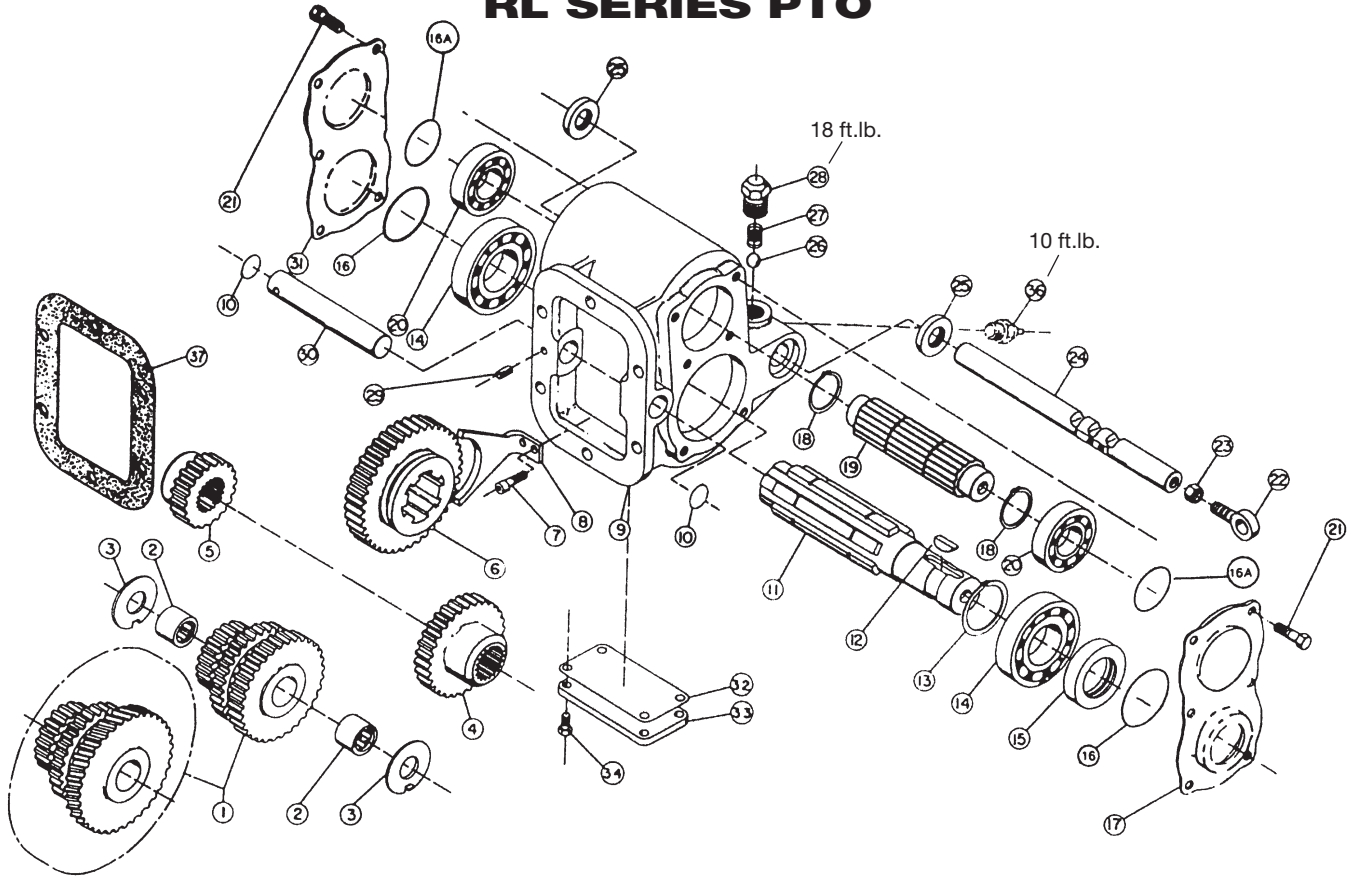
# RL SERIES PTO

## PARTS LIST AND SERVICE MANUAL





# RL SERIES PTO



## MODEL NUMBER CONSTRUCTION

**RL 6D - U68 05 - L 3 B X**

### PTO Type

Reversible L Series - RL

### Mounting

S.A.E. 6 Bolt Std. Mtg. - 6D

S.A.E. 8 Bolt Std. Mtg. - 8S

### Trans.

### RL Gear Data

Clark	5.700P 25° PA 38.7° LH	-C57
Clark	6.100P 25° 32' 16" 48" LH	-C61
Fuller	6.1P 20.5° PA 29° LH	-F61
Fuller	6.35P 20° PA 22° LH	-F63
Mack	6.48P 17° 30' Spur	-M65
Universal	5 or 5/7P 20° Spur	-U57
Universal	6 or 6/8P 20° Spur	-U68

### Special Feature

X - None

### Output Type

B - 1 1/4 RD Std.

### Assy. Arrangement

2

3

### Shifter Type

A - Manual Air

L - Lever

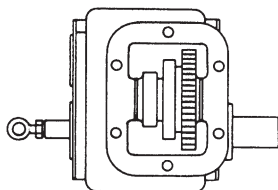
### Speed Ratio

03 - .24:1 (w/Low Box)

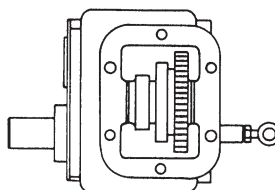
05 - .50:1

## ASSEMBLY ARRANGEMENTS

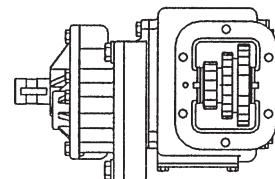
05 RATIO  
2



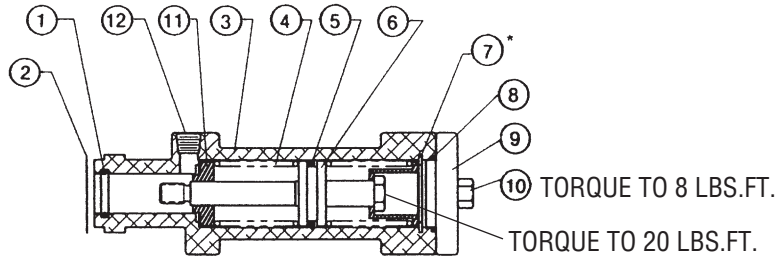
05 RATIO  
3



03 RATIO  
3



# AIR SHIFT CYLINDER 47TA3845

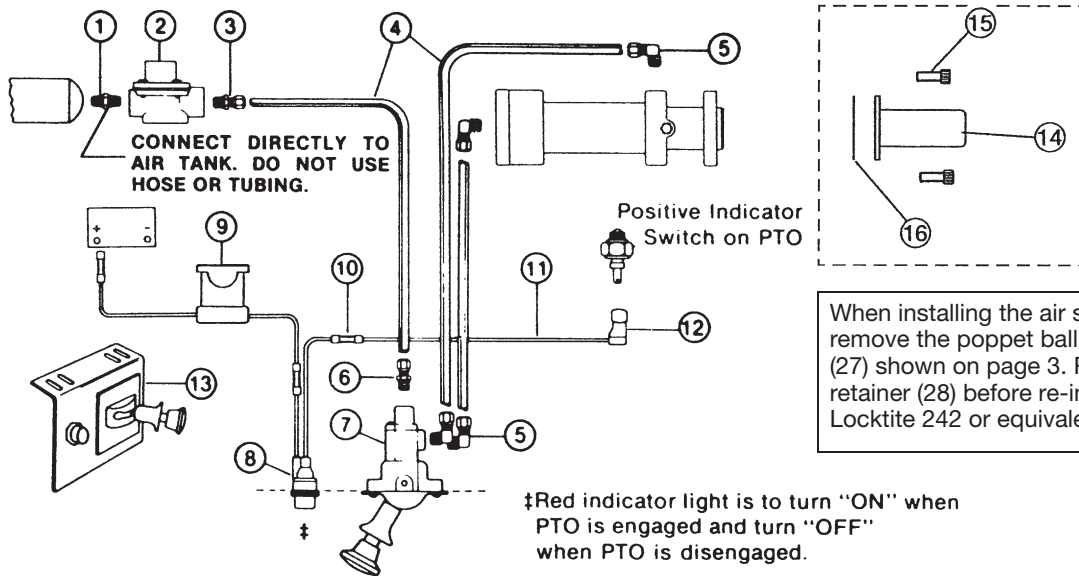


## PARTS LIST & DESCRIPTION

ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	12T35611	O-Ring	7*	1	24T35623	Snap Ring
2	1	13T35597	Gasket	8	1	12T35622	O-Ring
3	1	28T35599	Housing	9	1	28T35689	End Cap
4	1	27T35600	Spring	10	2	19T34494	Cap Screw
5	1	12T35621	O-Ring	11	1	28T35663	Spring Retainer
6	1	28TA3861	Piston Assembly (Incl: Piston, Piston Rod, Spring, and Retainer)	12	2	25T34029	Cap Plug
				N.S.	2	19T35624	Cap Screw

\*CAUTION: When removing item #7 (Snap Ring), there is a 32 Lb. preload on the springs. Depress piston assembly with proper tool before removal. Do not remove during attachment to PTO.

## STANDARD AIR SHIFT SYSTEM 48M61260-A (12V LIGHT) • 48M62460-A (24V LIGHT)



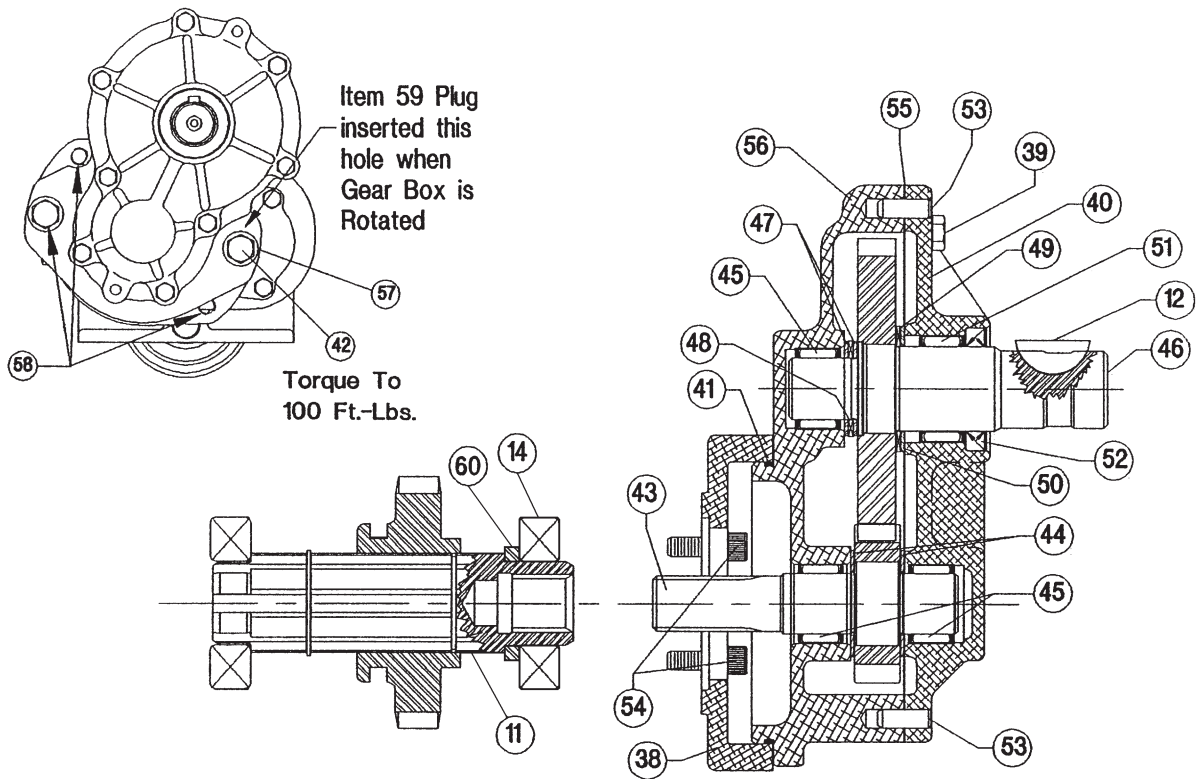
When installing the air shift system, remove the poppet ball (26) and spring (27) shown on page 3. Reseal poppet retainer (28) before re-installing, using Locktite 242 or equivalent.

## PARTS LIST & DESCRIPTION

ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	44MB2164	Nipple	12	1	34T38163	Booted Connector
2	1	31M15759	Pressure Protection Valve	13	1	36MA1006	Dash Bracket
3	1	44MB6844	Tube Fitting	N.S.	4	22MX2520	.25-20 Hex Nut
4	1	45M44430	Air Tubing - 30'	N.S.	4	19T34530	.25-20 x .50
5	4	44MB6942	Tube Fitting (Elbow)	N.S.	1	36MK1011	Buttonhead Capscrew
6	1	44MB6842	Tube Fitting	N.S.	1	36MK1011	Bolt Kit (Includes 4 each: Bolts, Nuts & Flat Washers)
7	1	35M18783	Air Valve	N.S.	1	36M01009	Face Plate
8	1	32M12001	Light (12 Volt)			<b>16TK3896</b>	<b>Shift Protector Kit:</b>
	1	32M24001	Light (24 Volt)	14	1	28T36461	Cap
9	1	33T36299	Fuse Assembly	15	2	19T31664	Capscrew
10	3	34M18002	Butt Splice	16	1	13T33976	Gasket
11	12	37M18000	Electric Wire - 12'				

**NOTE:** Conversion Kit Number - Lever to Air (12 Volt only listed) **16MK4261-A** (Includes Air Cylinder).

# RL SERIES LOW BOX

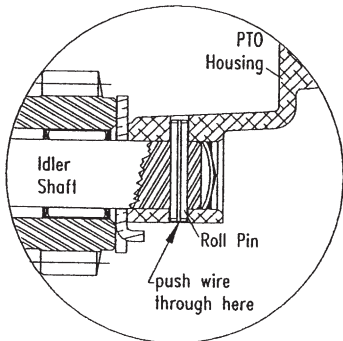


## PARTS LIST & DESCRIPTION

ITEM	QTY	PART NUMBER	DESCRIPTION
11	1	06T39215	Shaft, Output
14	2	10T21017	Ball Bearing
24	1	17T35231	Shaft, Shifter
38	1	14T35213	Mounting Flange
39	8	19T32740	Hex Head Capscrew
40	1	15T35209	Cover, Low Box
41	1	12T36872	O-Ring
42	2	19T35998	Hex Head Capscrew
43	1	07TA3806	Input Shaft Assy, Low Box
44	2	21T35233	Thrust Washer, Bearing
45	3	10T35243	Needle Bearing, Low Box
46	1	06TA3807	Output Shaft Assy, Low Box
47	2	21T35242	Thrust Race

ITEM	QTY	PART NUMBER	DESCRIPTION
48	1	10T27216	Needle Bearing
49	1	10T35239	Needle Bearing
50	1	21T35241	Thrust Race
51	1	10T35253	Needle Bearing
52	1	11T37790	Oil Seal
53	2	26T35232	Dowel Pin
54	4	19T39257	Socket Head Capscrew
55	1	13T35219	Gasket, Cover
56	1	01T35217	Housing, Low Box
57	2	21T36002	Washer, Hardened Steel
58	3	25T36001	Heli-Coil Insert (Inserted - Not sold Separately)
59	1	19T35235	Plug
60	1	18T39214	Spacer

**SUB ASSEMBLIES:** RL\*\*-\*\*\*05-L3VX RL - unit only with special shifter shaft, output shaft and flange to mount Low Box.  
 RLGB-200-125 Low Box assembly.



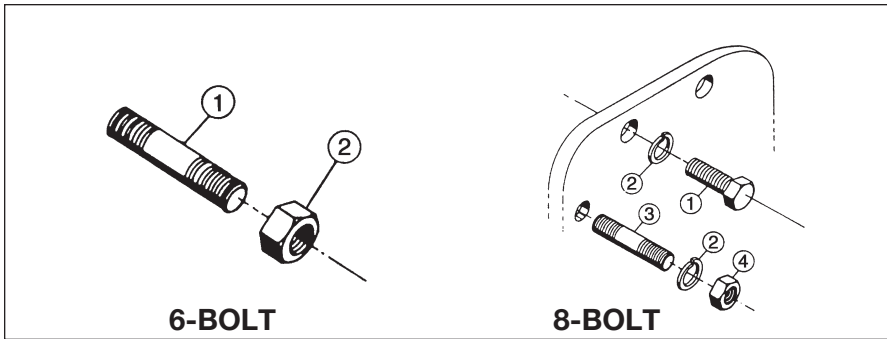
## ROLL PIN REMOVAL

When removing the roll pin in the idler shaft, first insert a small diameter wire into the center of the pin and push through to determine whether there is a through hole in the housing. The older style housing has a shorter roll pin which must be pushed flush with the idler shaft before removing the shaft. The current style housing allows the roll pin to be driven completely through the housing prior to removal of the idler shaft.

# RL SERIES PARTS LIST & DESCRIPTION

ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	03T39075	Input Gear (M65) (24/21/14T)	20	2	10T21042	Bearing
	1	03T96711	Input Gear (C57) (16/21/14T)	21	12	19T33233	Cap Screw
	1	03T96712	Input Gear (C61) (19/21/14T)	22	1	28T34746	Eye Bolt
	1	03T35078	Input Gear (F61) (17/21/14T)	23	1	22T21723	Nut
	1	03T35301	Input Gear (F63) (22/21/14T)	24	1	17T39077	Shifter Shaft
	1	03T28982	Input Gear (U57) (18/21/14T)		1	17T35231	Shifter Shaft (Low Box)
	1	03T28697	Input Gear (U68) (22/21/14T)	25	2	11T36865	Seal
2	2	10T28691	Bearing	26	1	28T20486	Ball (Not used in air shift)
3	2	21T21760	Washer	27	1	27T22021	Spring (Not used in air shift)
4	1	04T28694	Idler Gear	28	1	28T22019	Poppet Retainer
5	1	04T28696	Reverse Gear (14T)	29	1	26T24874	Roll Pin (5/8" Long)
6	1	02T28695	Output Gear (28T)		1	26T35996	Roll Pin (1-1/8" Long)
7	2	19T35624	Cap screw	30	1	07T36895	Idler Shaft
8	1	28T24419	Yoke	31	1	15T34877	Cap
9	1	01T39076	Housing (6-Bolt)	32	1	13T34022	Gasket
	1	01T35310	Housing (8-Bolt)	33	1	16T33999	Inspection Cover
10	2	12T36899	O-Rings	34	4	19T34028	Cap screw
11	1	06T28805	Output Shaft	36	1	30T38111	Indicator Sw. (N.O.-White) (Incl. 12T36526 O-Ring)
	1	06T39215	Output Shaft (Low Box)	37	1	13M35091	.010 6-Bolt Gasket
12	1	26T01627	Woodruff Key		1	13M35092	.020 6-Bolt Gasket
	1	26T20105	Square Key		1	13M35151	.010 8-Bolt Gasket
13	1	24T23467	Snap Ring		1	13M35152	.020 8-Bolt Gasket
14	2	10T21017	Bearing	N.S.	1	20MK6601	Mounting Kit 6-Bolt
15	1	11T37002	Seal		1	20MK8800	Mounting Kit 8-Bolt
16	2	13T21041	Gasket (Old Style)	N.S.	1	RL-GSK	Gasket & Seal Kit Includes items: 10(2), 15(1), 16(2), 16A(2), 25(2), 32(1), 12T36526(1)
	2	12T36751	O-Ring				
16A	2	12T36874	O-Ring				
17	1	15T34878	Cap				
18	2	24T24314	Snap Ring				
19	1	08T28693	Reverse Idler Shaft				

Torque 5/16" Capscrews to 18 Ft.-Lbs. Torque 1/4" Capscrews to 9 Ft.-Lbs.



## 6-BOLT MOUNTING KITS

Item Qty Part No. Description

### 20MK6601 RL6D

1 6 20M38150 Stud  
2 6 22T39282 Hex Nut

### 20MKM602 RL6C METRIC

1 6 20M39040 40mm Stud  
2 6 22T39282 Hex Nut

## 8-BOLT MOUNTING KITS

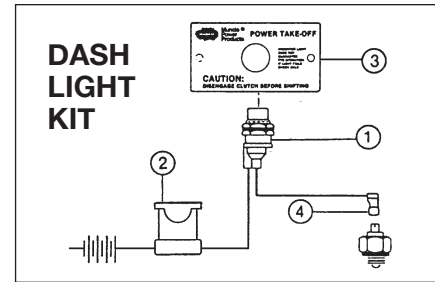
Item Qty Part No. Description

### 20MK8800 RL8S

1 6 19M44138 Capscrew  
2 8 21ML4375 Lockwasher  
3 2 20M44175 Stud  
4 2 22MX4420 Nut

### 20MKM801 RL8B METRIC

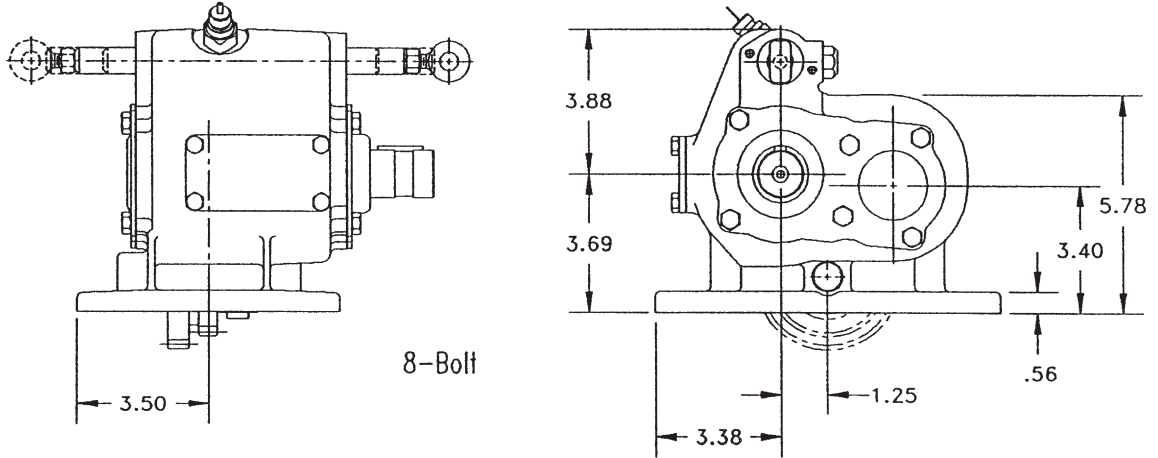
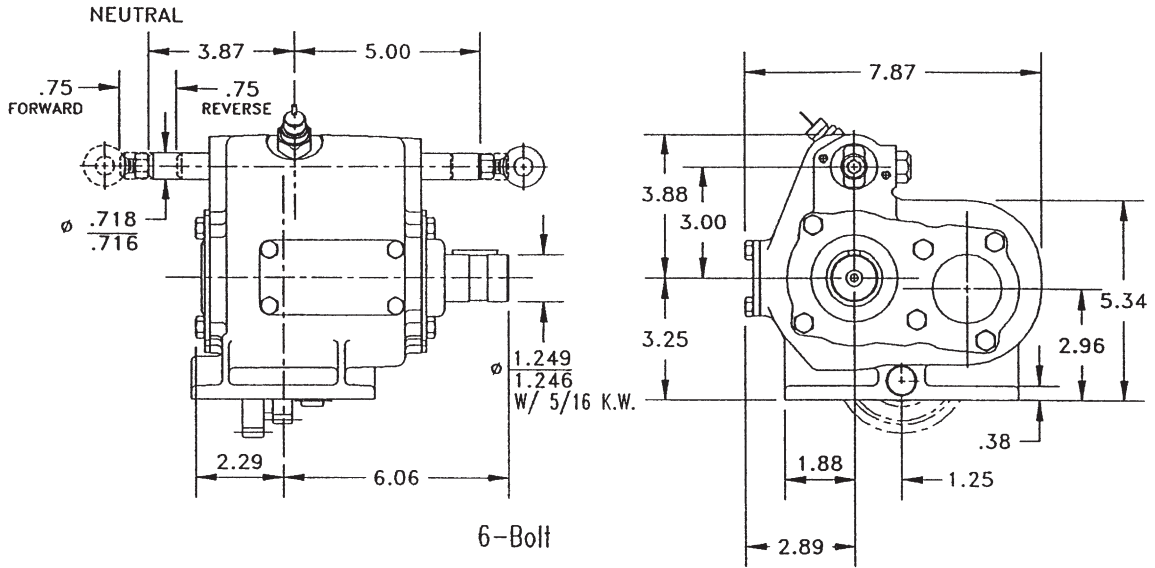
2 8 21ML4375 Lockwasher  
3 8 20M47050 50mm Stud  
4 8 22MX4420 Nut



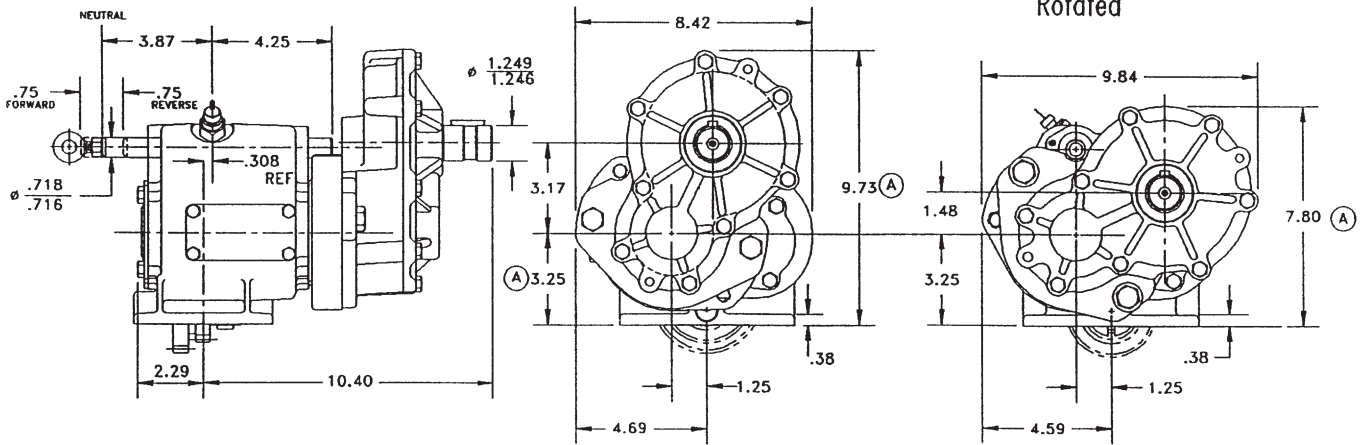
## DASH LIGHT KIT 36MK1210-A

Qty Qty Part No. Description  
1 1 32M12001 Indicator Light  
2 1 33T36299 Fuse Assembly  
3 1 36M16818 Dash Face Plate  
4 1 34T28163 Shifter Gasket

# RL SERIES DIMENSIONS



# 03 RATIO LOW BOX DIMENSIONS



(A) ADD .44" FOR 8-BOLT HOUSING



**Muncie<sup>®</sup>  
Power  
Products**

SP94-01 (Rev. 01-15) Printed in the U.S.A.  
© Muncie Power Products, Inc. 2009

Muncie Power Products, Inc. *Member of the Interpump Hydraulics Group*  
General Offices and Distribution Center • P.O. Box 548 • Muncie, IN 47308-0548  
(765) 284-7721 • FAX (765) 284-6991 • E-mail [info@munciepower.com](mailto:info@munciepower.com)  
Web site <http://www.munciepower.com>

Drive Products, Exclusive Agents for Canada, *ISO Certified by an Accredited Registrar*