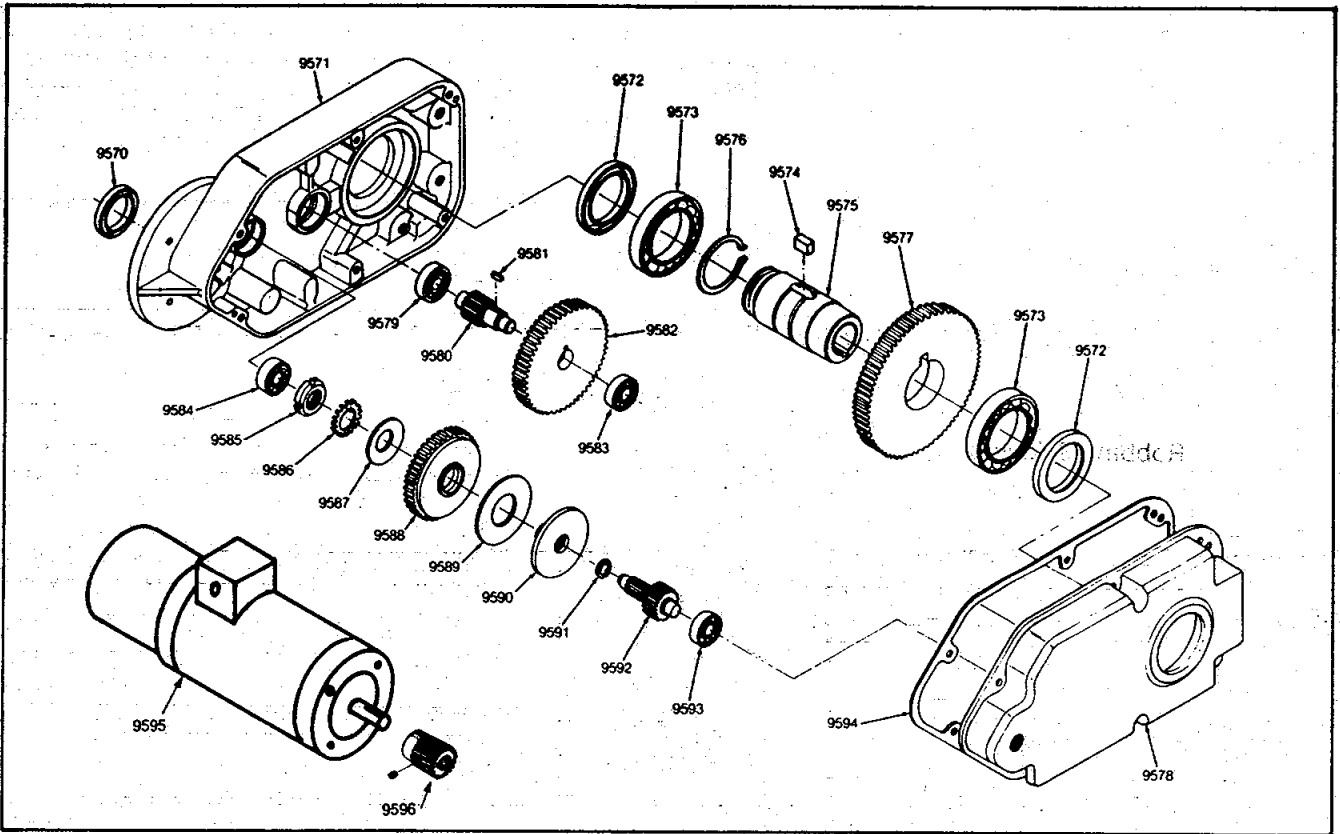


SPARE PARTS IDENTIFICATION 415-1

**MATERIALS HANDLING DIVISION
1345 LAGONDA AVE.
SPRINGFIELD, OHIO 45501
513-328-5100**

This is your operation and maintenance manual for your ~~Robbins & Lyman~~ TR3 gearmotor. A copy of this manual was included with the shipment. Please specify the serial # and part reference # for prompt service.

SERIAL # _____
CATALOG # _____
MOTOR H.P. _____ @ _____ RPM
CURRENT _____ VOLT _____ PH _____ CYCLE



TR 3 MOTORREDUCER GEARCASE

REFERENCE NUMBER	PART DESCRIPTION	REFERENCE NUMBER	PART DESCRIPTION
9570	OIL SEAL	9584	BALL BEARING
9571	GEARCASE	9585	BEARING LOCK NUT
9572	OIL SEAL	9586	BEARING LOCK WASHER
9573	BALL BEARING	9587	BEVELLED WASHER
9574	KEY	9588	SHOCK CLUTCH
9575	DRIVE SHAFT	9589	FRICITION DISC
9576	SNAP RING	9590	SHOCK CLUTCH DISC
9577	DRIVE GEAR	9591	SNAP RING
9578	GEARCASE COVER	9592	CLUTCH PINION
9579	BALL BEARING	9593	BALL BEARING
9580	INTERMEDIATE PINION	9594	GEARCASE GASKET
9581	KEY	9595	MOTOR
9582	INTERMEDIATE GEAR	9596	MOTOR PINION
9583	BALL BEARING		

DRIVE SERIAL NUMBER MUST BE FURNISHED IN ADDITION TO PART REFERENCE NUMBER

BRAKE

"E" FRAME ASSEM.

ARMATURE PLATE

AIR GAP

A

B

BOTH BRAKE STUDS TO BE HELD IN PLACE BY APPLYING A COAT OF GRADE "A" LOCTITE SEALANT TO THREADS IN FINAL ASSEMBLY.

MOVE THIS DIRECTION TO INCREASE TORQUE AND PROVIDE QUICKER STOP

MOVE THIS DIRECTION TO REDUCE TORQUE AND PROVIDE SMOOTHER STOP

All brakes are set at the factory for average conditions based on the capacity and speed. You may adjust the torque to suit your particular application.

To adjust brake torque-compress spring to the required level by adjusting nut "A", lock in place with jam nut.

To adjust brake for lining wear, set air gap at 1/32" (.031") by adjusting nut "B". Lock armature plate securely in place with jam nut.

IMPORTANT: Recheck air gap to make sure at least .031" air gap is present. For maximum life and performance from brake, adjustments should be made when air gap exceeds 1/16" due to friction disc wear. Disc should be replaced when thickness of disc is reduced to 1/8".

MOUNTING

The crane drive may be mounted in either a vertical or horizontal position.

CLUTCH ADJUSTMENT

The drive train is equipped with an override clutch to protect against potentially damaging impact loads. If excessive slips develop during normal operations, the clutch may be tightened. To tighten clutch remove the clutch assembly from the gear case. Tighten the bearing locknut (Fig. 415-1, Part No. 9585) all the way. Then back off locknut 1/4 turn. Relock in place with bearing lock washer (Fig. 415-1, Part No. 9586).

LUBRICATION

A good commercial grade gear lube is recommended for use as follows:

For ambient temperatures of -20° to 40°F use an 80 weight lube.

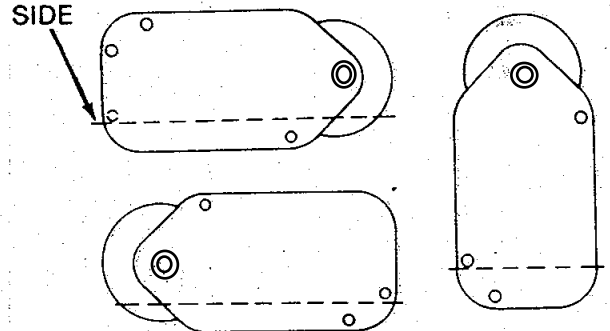
For ambient temperatures of 40° to 120°F use a 90 weight lube.

Vertical position use 1½ quarts.

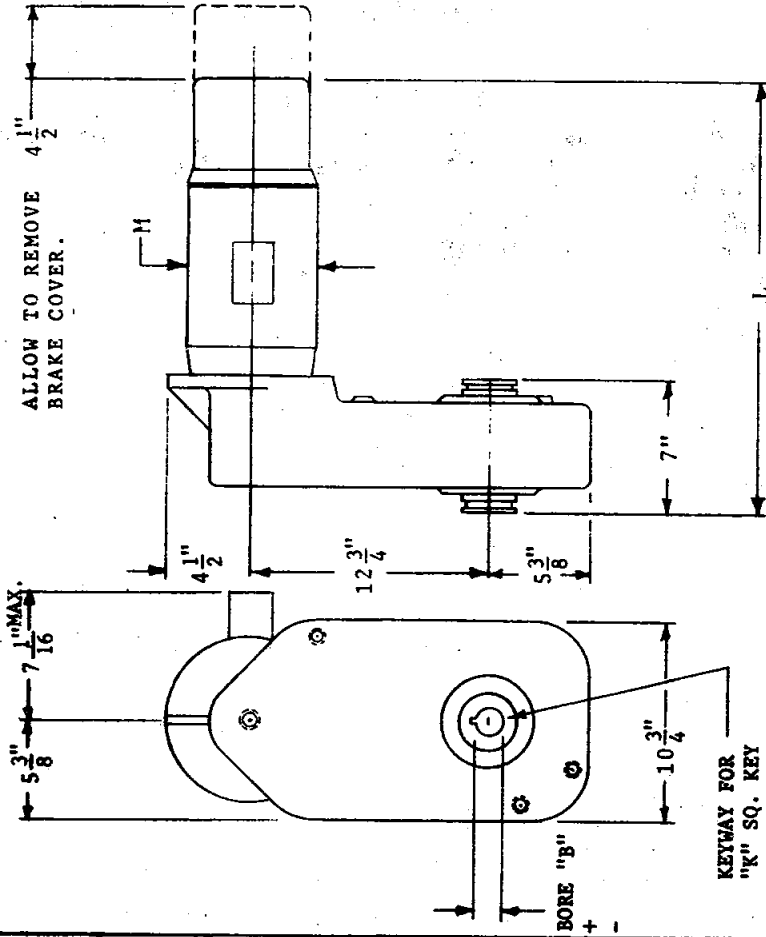
Horizontal position use 2 quarts.

NOTE: Before placing the drive unit in operation, oil level must be checked and filled.

CHECKING PLUG ON REVERSE SIDE



OIL LEVEL INDICATED BY HEAVY DASHED LINE



† BASED ON 1720 RPM F.L.

CATALOG NUMBER	MOTOR		OUTPUT		GEAR RATIO	BRAKE FOOT LBS MAX ADJ	B STD BORE	K STD KEYWAY
	HP	RPM NO LOAD	RPM NOMINAL	TORQUE IN-LBS†				
TR3-1-85A20*			20	2985	85.4		2.002"	1/2"SQ.
TR3-1-65A26*			26	2203	65.0		2.002"	1/2"SQ.
TR3-1-42A41*			41	1424	42.0		2.002"	1/2"SQ.
TR3-1-32A53*	1	1800	53	1085	32.0	4	2.002"	1/2"SQ.
TR3-1-19B89*			89	644	19.6		1.437"	3/8"SQ.
TR3-1-14B120*			120	481	14.2		1.437"	3/8"SQ.
TR3-1 1/2-65A26*			26	3305	65.0		2.002"	1/2"SQ.
TR3-1 1/2-42A41*			41	2135	42.0		2.002"	1/2"SQ.
TR3-1 1/2-32A53*	1 1/2	1800	53	1627	32.0	8	2.002"	1/2"SQ.
TR3-1 1/2-19B89*			89	997	19.6		1.437"	3/8"SQ.
TR3-1 1/2-14B120*			120	722	14.2		1.437"	3/8"SQ.
TR3-1 1/2-9B177*			177	493	9.7		1.437"	3/8"SQ.
TR3-2-65A26*			26	4406	65.0		2.002"	1/2"SQ.
TR3-2-42A41*			41	2847	42.0		2.002"	1/2"SQ.
TR3-2-32A53*			53	2169	32.0		2.002"	1/2"SQ.
TR3-2-19B89*	2	1800	89	1329	19.6	8	1.437"	3/8"SQ.
TR3-2-14B120*			120	963	14.2		1.437"	3/8"SQ.
TR3-2-9B177*			177	658	9.7		1.437"	3/8"SQ.
TR3-3-42A41*			41	4270	42.0		2.002"	1/2"SQ.
TR3-3-32A53*			53	3254	32.0		2.002"	1/2"SQ.
TR3-3-19B89	3	1800	89	1993	19.6	8	1.437"	3/8"SQ.
TR3-3-14B120*			120	1444	14.2		1.437"	3/8"SQ.
TR3-3-9B177*			177	986	9.7		1.437"	3/8"SQ.

ENGINEERING DEPARTMENT USE ONLY

CERTIFIED BY: _____ DATE: _____

FOR CUSTOMER P.O. _____ F.O. _____

CUSTOMER APPROVAL REQ'D YES NO

CUSTOMER USE ONLY

APPROVED FOR CONSTRUCTION:

BY: _____ DATE: _____

OF: _____

OUTLINE DIAGRAM

CATALOG NUMBER	MOTOR	REDUCER	OUTPUT TORQUE	POWER SUPPLY	BRAKE	MISC:	DIMENSION	MOTOR HP			
								1	2	3	
							L	2 7/8"	21 3/4"	22 3/4"	22 3/4"
							M	21 3/4"	22 3/4"	22 3/4"	22 3/4"
								11 1/16"	11 1/16"	11 1/16"	9"
								6 1/16"	6 1/16"	6 1/16"	9"
								9"	9"	9"	9"

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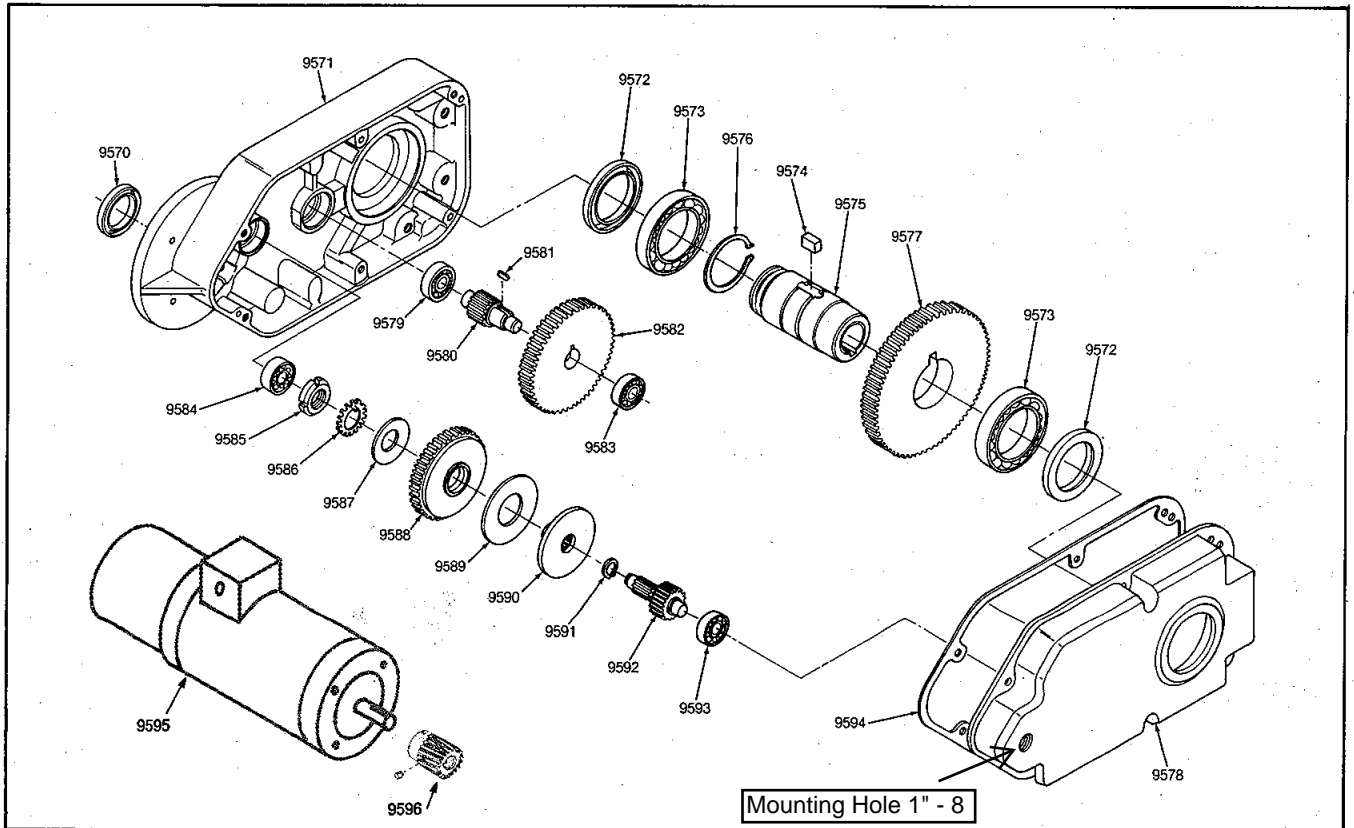
DATE: 6-9-81

MATERIALS HANDLING DIVISION
 SPRINGFIELD, OHIO 45501
 TELEPHONE (513) 326-5100

MATERIALS HANDLING DIVISION
 1345 LAGONDA AVE.
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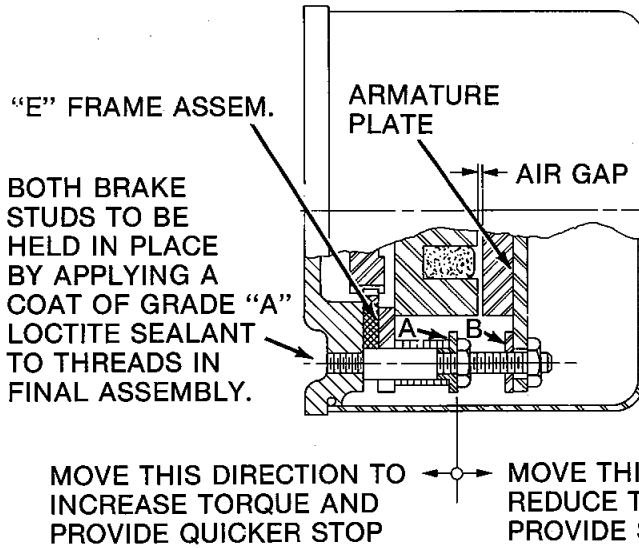


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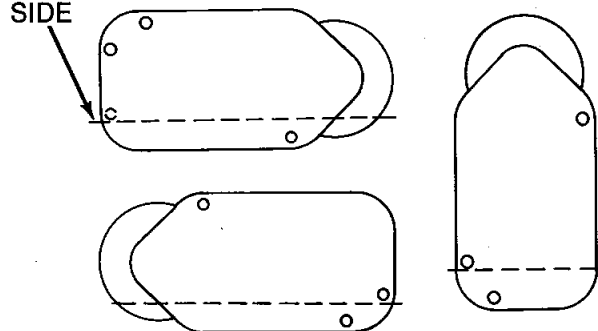
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Vertical position use $1\frac{1}{2}$ quarts.

Horizontal position use 2 quarts.

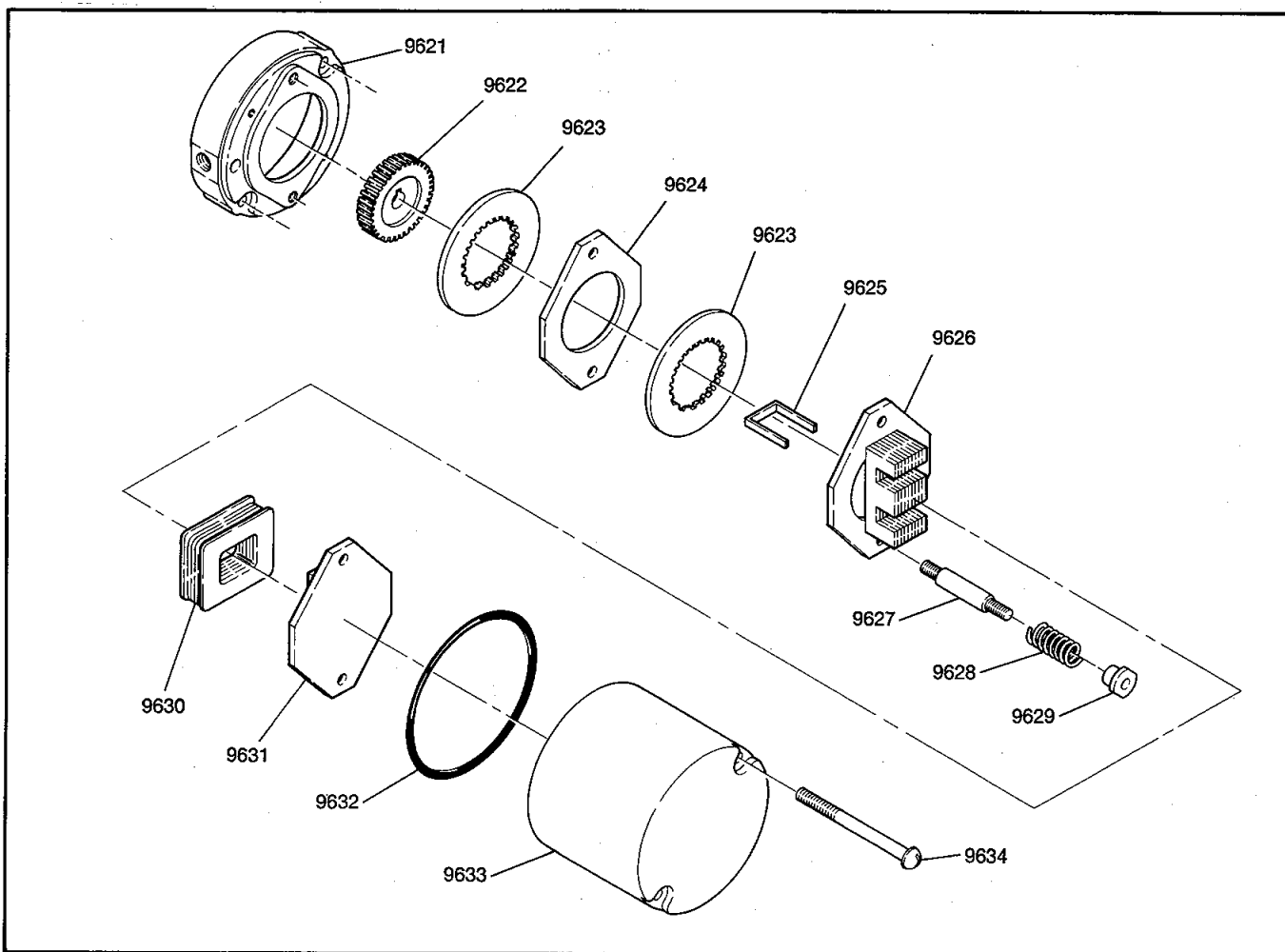
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CHECKING PLUG
ON REVERSE
SIDE



OIL LEVEL INDICATED BY HEAVY DASHED LINE

MATERIALS HANDLING DIVISION
1345 LAGONDA AVE.
SPRINGFIELD, OHIO 45501
513-327-3111



M4 MOTOR BRAKE

REFERENCE NUMBER	PART DESCRIPTION
9621	Brake Adapter
9622	Brake Hub
9623	Friction Discs
9624	Thrust Discs
9625	Wedge
9626	Pole Plate Assembly
9627	Brake Stud
9628	Spring
9629	Lockwasher
9630	Coil
9631	Armature Plate Assembly
9632	Gasket
9633	Brake Cover
9634	Bolt
*9635	Brake Assembly

*USE THIS NUMBER WHEN ORDERING COMPLETE ASSEMBLY
DRIVE SERIAL NUMBER *MUST* BE FURNISHED IN ADDITION TO PART REFERENCE NUMBER.