



TOTALIZER TRANSMITTER

MODELS TR01-1-30 AND TR01-1-150

INDICATOR-TOTALIZER TRANSMITTER

MODELS TR06-1-30 AND TR06-1-150

OPERATION AND MAINTENANCE MANUAL PARTS LIST

FEATURING:

*SEALED HOUSING

*STANDARD TOTALIZER ASSEMBLY

*MAGNETICALLY ACTUATED REED SWITCH

*MECHANICAL DRIVE INDICATOR AND TOTALIZER FUNCTIONS



3255 WEST STETSON AVENUE
HEMET, CALIFORNIA 92545 U.S.A.

PHONE: 951-652-6811

FAX: 951-652-3078

VISIT OUR WEBSITE: www.mccrometer.com

WARRANTY

This Warranty shall apply to and be limited to the original purchaser consumer of any McCrometer product. Meters or instruments defective because of faulty material or workmanship will be repaired or replaced, at the option of McCrometer, free of charge, FOB the factory in Hemet, California, within a period of one (1) year from the date of delivery.

Repairs or modifications by others than McCrometer or their authorized representatives shall render this Warranty null and void in the event that factory examination reveals that such repair or modification was detrimental to the meter or instrument. Any deviations from the factory calibration require notification in writing to McCrometer of such recalibrations or this Warranty shall be voided.

In case of a claim under this Warranty, the claimant is instructed to contact McCrometer, 3255 W. Stetson Ave., Hemet, California 92545, and to provide an identification or description of the meter or instrument, the date of delivery, and the nature of the problem.

The Warranty provided above is the only Warranty made by McCrometer with respect to its products or any parts thereof and is made expressly in lieu of any other warranties, by course of dealing, usages of trade or otherwise, expressed or implied, including but not limited to any implied warranties of fitness for any particular purpose or of merchantability under the uniform commercial code. It is agreed this Warranty is in lieu of and buyer hereby waives all other warranties, guarantees or liabilities arising by law or otherwise. Seller shall not incur any other obligations or liabilities or be liable to buyer, or any customer of buyer for any anticipated or lost profits, incidental or consequential damages, or any other losses or expenses incurred by reason of the purchase, installation, repair, use or misuse by buyer or third parties of its products (including any parts repaired or replaced); and seller does not authorize any person to assume for seller any other liability in connection with the products or parts thereof. This Warranty cannot be extended, altered or varied except by a written instrument signed by seller and buyer.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

McCrometer reserves the right to make improvements and repairs on product components which are beyond the Warranty period at the manufacturer's option and expense, without obligation to renew the expired Warranty on the components or on the entire unit. Due to the rapid advancement of meter design technology, McCrometer reserves the right to make improvements in design and material without prior notice to the trade.

All sales and all agreements in relation to sales shall be deemed made at the manufacturer's place of business in Hemet, California and any dispute arising from any sale or agreement shall be interpreted under the laws of the State of California.

**MODELS TR01-1-30 AND TR01-150
TOTALIZER TRANSMITTER**

**MODELS TR06-1-30 AND TR06-1-150
INDICATOR -TOTALIZER TRANSMITTER**

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I. DESCRIPTION

MODELS TR01-1-30 AND TR01-1-150 TRANSMITTERS are designed to provide a totalization of flow volume and a pulse rate output signal, and **MODELS TR06-1-30 AND TR06-1-150 TRANSMITTERS** are designed to provide an instantaneous flow rate indication, a totalization of flow volume, and a pulse rate output signal proportional to the rate of flow when mounted on any McCrometer propeller meter (some meters must be equipped with a special adapter ring, part number 2-4108). The transmitter utilizes a durable magnetically actuated reed switch. The bonnet, with padlock hasp, and transmitter base are o-ring sealed to the meter head.

II. SPECIFICATIONS

ACCURACY

Pulse output: plus or minus 2% of actual flow within the range specified for each meter size.

TEMPERATURE RANGE

160° F maximum. Consult the factory for special construction for higher temperature.

FLOW RANGE

acceptable for each transmitter unit is the same as that for the meter to which the unit mounts.

OUTPUT SIGNAL

30 PPM: 30 alternating contacts per minute at maximum scale range.
50% ON-50% OFF
(Three Wire)
150 PPM: 150 contacts per minute at maximum scale range (Two Wire)

CONTACT RATING

30 PPM: 1 amp, 110 volts AC maximum resistive, non-shorting
3 amps, 28 volts DC maximum resistive
150 PPM: 1 amp, 110 volts AC maximum resistive
3 amps, 28 volts DC maximum resistive

MATERIALS

used in construction are chosen for their durability and immunity to the corrosive effects of atmospheric moisture and of the liquids measured by the meter assembly.

SHIPPING WEIGHT

4 pounds

ORDERING INFO

must be specified by the customer and includes:
Serial number of meter unit is to be mounted, or
Change gear and type of dial on totalizer that is going to be replaced.
Indicator scale units.
Totalizer dial units.

**TRANSMITTER
INSTALLATION**

III. UNPACKING. When unpacking the unit, any damage due to rough or improper handling should be reported to the transportation firm and McCrometer. If for any reason it is determined that the unit or parts of the unit should be returned to the factory, please contact McCrometer for clearance prior to shipment. Each unit must be properly packaged to prevent any further damage. The factory assumes no responsibility for equipment damage in return shipment due to improper packaging.

The shipping carton contains the following items:

- Model TR01-1-30 or TR01-1-150 or 1
- Model TR06-1-30 or TR06-1-150 1
- Base O-Ring 1
- Mounting Screws with Washers 4
- Transmitter Drive Clevis 1
- Transmitter Drive Clevis Coupling 1
- Instruction Manual 1

IV. INSTALLATION is normally made at the factory when the meter is assembled, but may be made in the field. Depending on what situation exists, various steps for installation apply and the procedures are outlined below.

1. REMOVE BONNET from meter head by removing mounting screws. Remove totalizer or indicator from meter head by removing mounting screws and lifting unit off.

2. CLEAN METER HEAD of all dirt, glue, and other foreign material.

***3. TOTALIZER DRIVE MAGNET** can now be removed from the vertical shaft by loosening the set screw in the side of the magnet hub and sliding the magnet assembly off the vertical shaft.

***4. ADAPTER PLATE** part #A-2-4108, and gasket #1558-3 must be attached to the top of the meter head on the old style LP21 (3 hole bolt circle) and all ML45, 47, 49. Adapter plate can be secured to the meter head by three mounting screws, (1116-8-12) after the gasket has been centered on the head. Throughout the manual, the top of the adapter plate will be referred to as the top of the meter head.

****5. VERTICAL SHAFT REMOVAL** can be accomplished by removing the two screws inside the meter head which secure the vertical shaft collar and bearing assembly to the meter head. Remove the A-drive gear (#7) from the vertical shaft after loosening the set screw in the gear hub. Spin the vertical shaft collar and bearing assembly gently, checking for any sign of wear. If collar and bearing assembly are all right remove from shaft by loosening set screw in hub and sliding off. Collar and bearing assembly will be used on the new vertical shaft.

****6. REPLACEMENT VERTICAL SHAFT** should be inspected to be sure it is not bent or damaged. Insert new shaft gently into the gearbox through the opening in the top of the meter

head. Rotate the shaft gently until it is engaged in the driven miter gear shaft of the miter gear frame assembly. Replace the collar and bearing assembly and secure the two screws that hold it in place. Do not overtighten the screws as this can cock the bearing and bind the vertical shaft. Tighten set screw in the hub. Turn the top of the vertical shaft to check for any bind or drag. Should any bind or drag be apparent, it can usually be corrected by adjusting the vertical shaft collar and bearing assembly. Loosen the set screw in the hub and slide the shaft downward until it rests firmly against the driven miter gear shaft, then lift up about 1/64". Tighten set screw.

7. DRIVE CLEVIS (#37) can now be placed on the vertical shaft, forked end up. The top of the forked end of the drive clevis (#37) should be positioned 1/8" below the top surface of the meter head. (On non-reversing models the entire ratchet assembly should be placed on the vertical shaft and the measurement taken from the top of the forked portion.) Place the plastic coupler (#38) on the drive clevis (#37), the end of the coupler (#38) with the largest bore should be up.

8. POSITION OF TRANSMITTER on the top of the meter head can be made in one of four directions for the easiest possible reading. Normally the units are attached such that they can be read when looking upstream. Be sure the clevis is in proper alignment and makes a positive engagement. Secure the four mounting screws snugly.

9. TRANSMITTER WIRING can be accomplished by following the wiring diagram on page 7.

**TRANSMITTER
SERVICE MANUAL**

V. MCCROMETER products have been carefully designed to be as maintenance free as possible. Periodic preventive maintenance, however, is highly recommended and should be practiced according to schedule to assure continuous accuracy and trouble-free performance of your transmitter. The maintenance and inspection procedure can also be used as a guide to locating a problem in the unit that may be the cause of abnormal operation.

1. TRANSMITTERS WITH STANDARD TOTALIZERS. YEARLY INSPECTION should be practiced on all transmitters but should not require complete disassembly of the unit. It should however include, cleaning, and inspection of the totalizer. (see steps VI, VII- 1 thru 4, X and XI-1 thru 3).

#2. TRANSMITTERS WITH INDICATOR-TOTALIZERS. YEARLY INSPECTION should be practiced on all transmitters

*** For Converting Existing Meter From Standard Totalizer to Transmitter Only.**

**** For Converting Existing Meter From CN-06 to Transmitter Only (Serial # 821935 and Lower, .100 Dia. Vert. Shaft Tip.)**

but should not require complete disassembly of the unit. It should however include, cleaning, and inspection of the indicator. (See steps VI, VIII-1 thru 5, X and XI-4 thru 6.)

VI. WORKING AREA chosen for cleaning and inspection of the internal components should be clean to reduce the chance of dust or dirt particles being introduced into the transmitter mechanism.

VII. TOTALIZER ASSEMBLY (#4) service procedure should include cleaning and inspection of the unit noting any excessive wear on the change gears (#7 & #8) that may lead to operational problems in the unit.

1. BONNET MOUNTING SCREWS (#3) should be removed and the entire bonnet (#1) lifted off of the meter.

2. TOTALIZER is contained within the totalizer bonnet (#1) and held in place by a base cup (#5). It should not be necessary to remove the totalizer (#4) during inspection; however, removal of the base cup (#5) is necessary for inspection of the totalizer change gears (#7 & #8). Removal of the base cup (#5) can be accomplished by inserting a small screwdriver into the two cutouts and prying upward under the edge.

3. TOTALIZER CHANGE GEARS (#7 & #8) should be inspected for any sign of wear. Both the A-(drive) gear and B-(driven) gear are attached to the lower portion of the totalizer assembly (#4). Spin the floating totalizer driven magnet in the center of the totalizer bottom (#4) to make certain it spins freely without bind or drag. The bottom of the totalizer has the letter A molded next to the A-drive gear shaft, and the letter B next to the B-driven gear shaft.

4. TOTALIZER DRIVE MAGNET ASSEMBLY (#9) located in the transmitter base (#10) at the top of the driven clevis shaft (#30) should be checked and adjusted if necessary to position it 1/16 inch below the top surface of the transmitter base (#10). Adjustments can be made by loosening the socket head set screw in the side of the totalizer drive magnet assembly (#9), and sliding it up or down the driven clevis shaft (#30) as desired. Always be sure the set screw is tightened into the flat on the driven clevis shaft (#30).

VIII. INDICATOR-TOTALIZER service procedure should be practiced every year and should include removal, cleaning, and inspection of the unit, noting any excessive wear on the gears and other wear points that may lead to operational problems in the unit.

‡1. BONNET MOUNTING SCREWS (#3) located beneath the indicator-totalizer bonnet lid, should be removed and the entire bonnet (#1) lifted off of the transmitter. Replace the o-ring seals around each of the four screws (#3) and at the bottom of the bonnet (#2), and cover each of the new o-rings with a thin coat of silicone grease.

‡2. INDICATOR MOUNTING SCREWS (#6) and shakeproof washers (#7) holding the indicator-totalizer unit (#5) to the

transmitter base (#11) should be removed and the unit lifted off, exposing the A-drive gear (#8) attached to the top of the driven clevis shaft (#30).

‡3. METER CHANGE GEARS should be inspected for any sign of wear. The A-(drive) gear (#8) is attached to the top of the driven clevis shaft (#30), and the B-(driven) gear (#9) is attached to the bottom of the indicator (#5). The position of the A-drive gear should be checked and adjusted if necessary to position the top face of the gear 1/8 inch below the top surface of the transmitter base (#10). The position of the B-driven gear top face should be 1/8 inch below the bottom of the indicator-totalizer.

‡4. INDICATOR-TOTALIZER unit (#5) should be cleaned thoroughly using a mild soap and a soft brush. Under no circumstances should the entire unit be immersed in the soap or should any metal object be used when cleaning and inspecting the internal parts of the indicator-totalizer unit.

‡5. GEARS within the indicator-totalizer unit (#5) should be inspected carefully. If any excessive wear is visible on the gear teeth and other wear points, the unit must be returned to McCrometer for repair.

IX. TROUBLESHOOTING the transmitter is necessary if it is determined that the meter assembly and instrument being controlled by the transmitter are working properly but the transmitter is not functioning.

1. WIRING CONNECTIONS at the printed circuit card (#12) should be checked to be sure the wires are securely attached to the terminal strip.

2. 30 PPM TRANSMITTERS' continuity check should be performed on the transmitter, at the instrument, by first using an ohm meter wired between the black and white (common) transmitter lines (see wiring diagram). With the instrument disconnected and the meter operating, the ohm meter should show continuity pulses. Now repeat the check between the green and white (common) transmitter lines (see wiring diagram). If the ohm meter responds to the tests then the instrument is the likely cause of the problems.

3. 150 PPM TRANSMITTERS' continuity check should be performed on the transmitter, at the instrument, by using an ohm meter wired between the black and white transmitter lines (see wiring diagram). With the instrument disconnected and the meter operating, the ohm meter should show continuity pulses. If the ohm meter responds to the test then the instrument is the likely cause of the problems.

4. TRANSMITTER LINES should be checked, at the junction box, if the ohm meter didn't respond to the above test. Connect the ohm meter (as described in #2 for 150 PPM, or #3 for 30 PPM) to the transmitter lines (in the junction box). If the ohm meter responds to this test then the transmitter lines between

‡ For Indicator-Totalizers Only.

the junction box and the instrument are the likely cause of the problem.

5. REED-SWITCH should be checked if the continuity checks showed that no contact was being made. The reed-switch assembly (#12) should be securely attached to the transmitter top plate (#19), and the transmitter wires should be securely attached to the switch leads and circuit card (#12). With the meter operating, the magnetic switch actuator (#25) should be turning. If the actuator (#25) is not turning and the meter is operating properly, then the transmitter unit should be removed and the clevis checked and readjusted if necessary. (See IV-7.) If the red seal on the top of the switch mounting screws (#23) is broken and the switch assembly (#12) is loose, the transmitter must be returned for recalibration.

X. INSPECTION of all internal transmitter parts that may be replaced in the field has been accomplished at this point. Should any of the transmitter parts, upon inspection, appear to be damaged or excessively worn, they must be replaced to assure proper operation and prevent further damage.

XI. REASSEMBLY is necessary at this point. Before reassembling make certain that the unit is cleaned of any dust or dirt. Costs for replacement parts not covered by warranty are available from current parts and price list. If it is determined that the unit should be returned for repair, please notify McCrometer prior to shipment. Each unit must be properly packaged to prevent damage to the unit in shipment.

1. TOTALIZER DRIVE MAGNET ASSEMBLY (#9) should be checked again to make certain it is properly set to drive the totalizer (#4). (See step VII, 4.)

2. TOTALIZER BASE CUP (#5) can be placed back in the totalizer bonnet (#1) on the totalizer assembly (#4) after the desiccant capsule and the base cup o-ring (#6) are replaced and the new o-ring (#6) has been covered with a thick coat of silicone grease. Be sure o-ring (#6) is on base cup (#5) properly. When reinstalling the cup (#5), put two drops of super glue on the inside edge of the bonnet 180° apart and push cup firmly into the bonnet and hold for 30 seconds.

3. BONNET ASSEMBLY (#1) should be cleaned and replaced on the transmitter (#10). Bonnet o-ring (#2) should be replaced and the new o-ring (#2) covered with a thin coat of silicone grease. Secure four screws (#3).

‡4. CHANGE GEARS (#7 & #8) should be checked again to make certain they are in proper alignment (see step VIII-3). The gear teeth should be lubricated with a light grease to assure longer life.

‡5. INDICATOR-TOTALIZER mechanism (#5) should be placed on the transmitter (#10) with the mounting screws and shakeproof washers (#6 & #7). Do not tighten mounting screws (#6) until the gear mesh has been properly adjusted. To

‡ For Indicator-Totalizers Only.

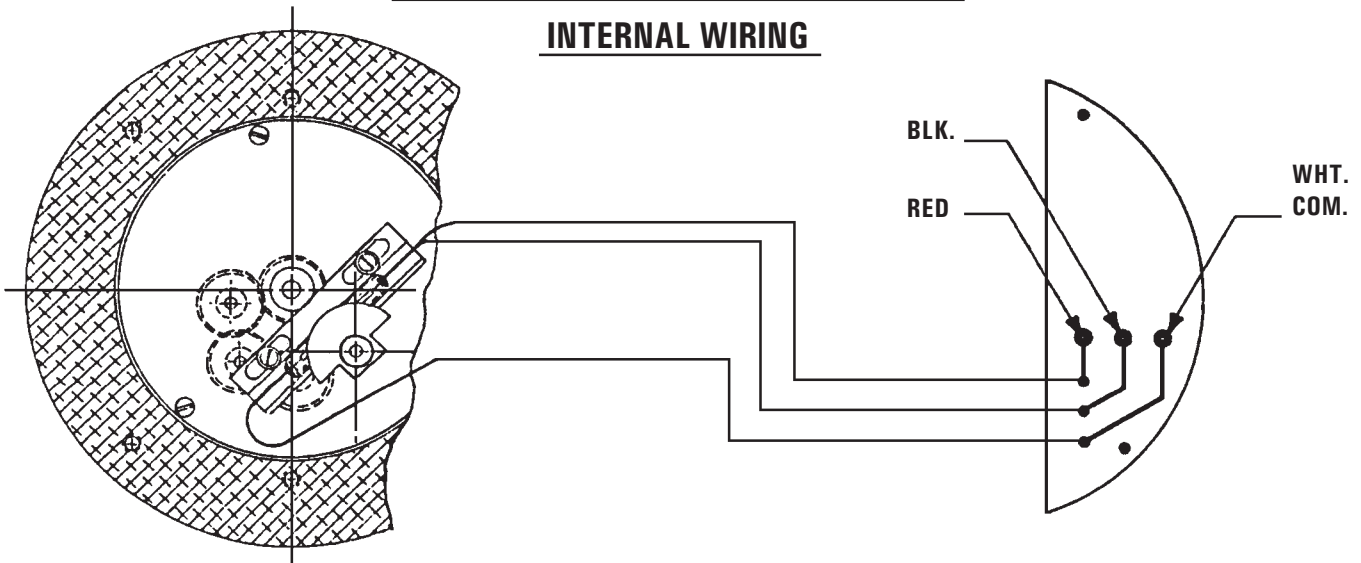
adjust gear mesh slide the indicator-totalizer mechanism (#5) towards the A-drive gear (#8) until the unit stops because of full gear mesh. Now back off the indicator-totalizer mechanism 1/64 inch and tighten mounting screws (#6).

‡6. BONNET ASSEMBLY (#1) should be cleaned and replaced over the indicator-totalizer unit (#5) after replacing the desiccant bag. Secure four screws (#2) beneath the bonnet lid. Do not overtighten the mounting screws (#2) as this will result in damage to the screw o-rings (#3).

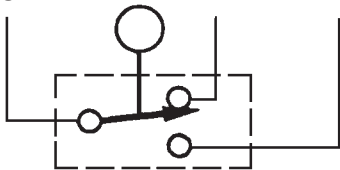
NOTES

30 PPM TRANSMITTERS MODELS TR01-1-30 & TR06-1-30 WIRING DIAGRAM

INTERNAL WIRING

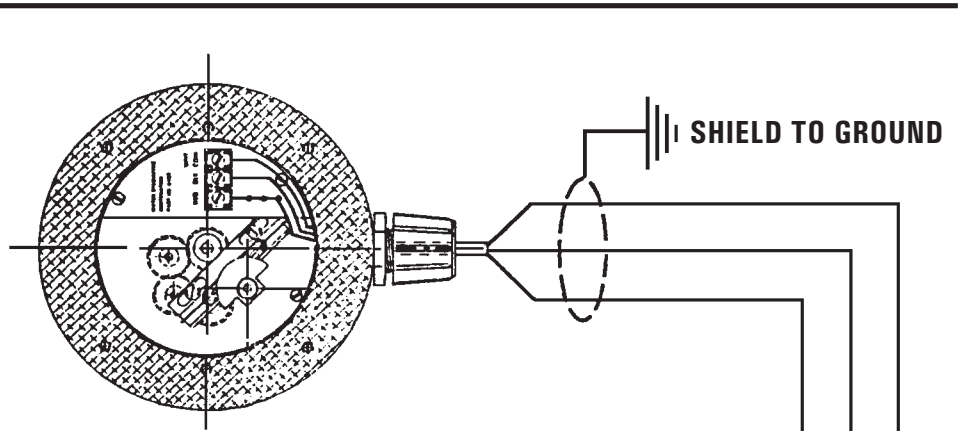


WHT. COM. RED BLK.



**BREAK BEFORE MAKE
30 PPM ALTERNATING
30 PPM BETWEEN WHITE COM. & RED
30 PPM BETWEEN WHITE COM. & BLK.
(180° OUT OF PHASE)**

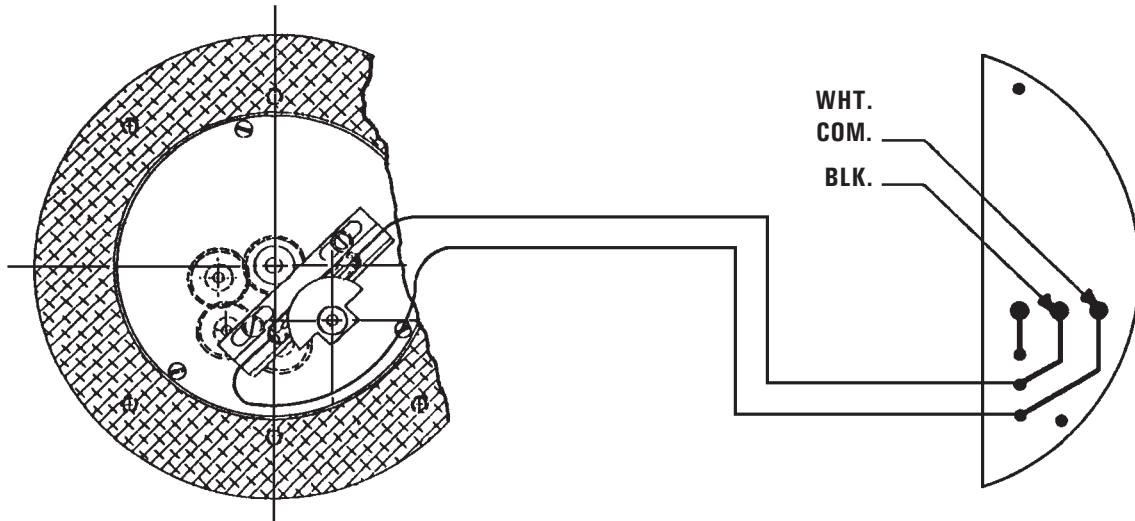
EXTERNAL WIRING



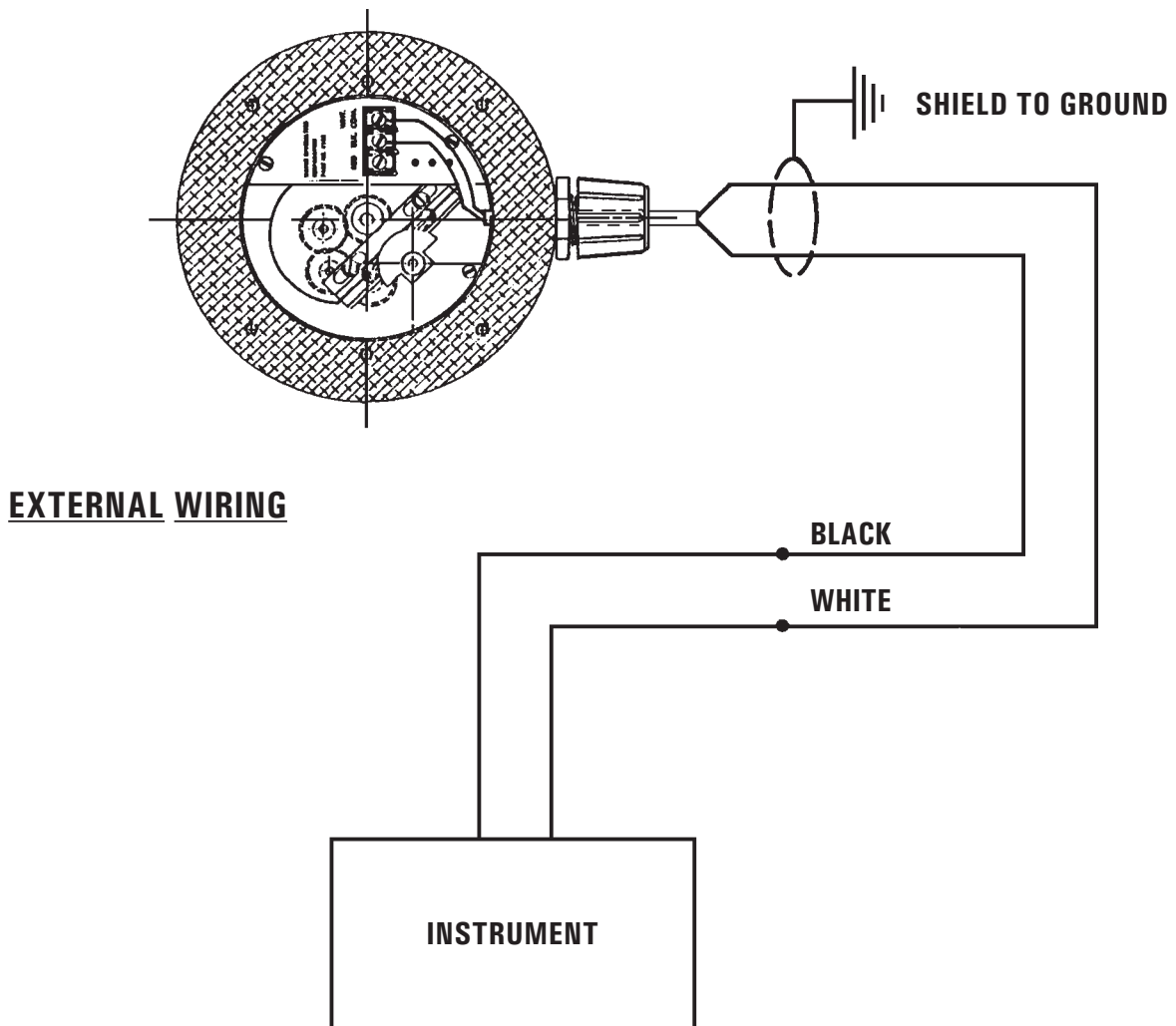
WHITE WHITE/COM
BLUE BLACK
GREEN RED

**SPARLING SERIES 200
READOUT DEVICES**

150 PPM TRANSMITTERS MODELS TR01-1-150 & TR06-1-150 WIRING DIAGRAM



REED SWITCH WIRING



EXTERNAL WIRING

TOTALIZER-TRANSMITTER

MODELS TR01-1-30 & TR01-1-150

PARTS LIST

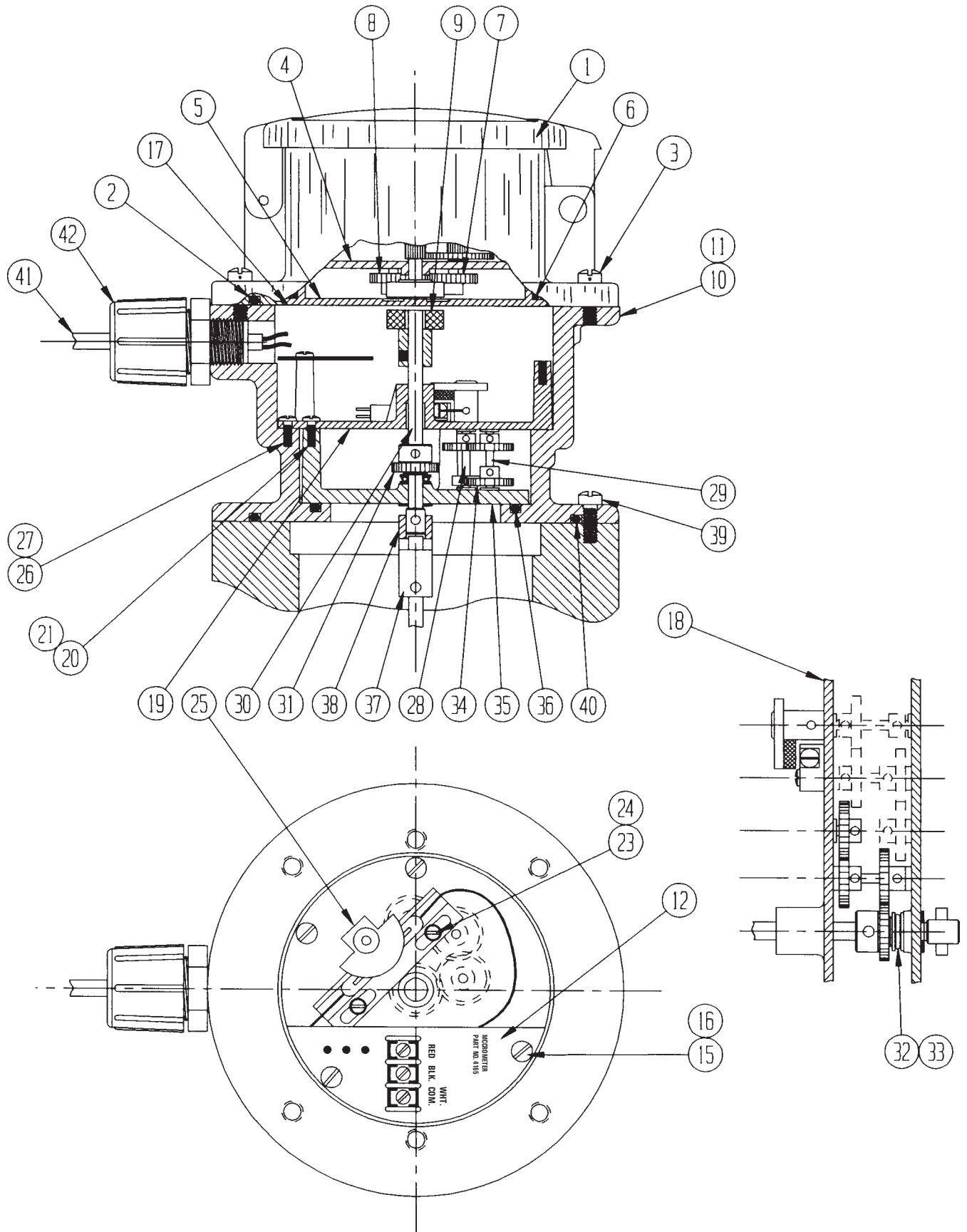
NO.	QTY.	PART NUMBER	DESCRIPTION
	-	7-TR01-1-30	MODEL TR01-1-30 INDICATOR-TOTALIZER TRANSMITTER
	-	7-TR01-1-150	MODEL TR01-1-150 INDICATOR-TOTALIZER TRANSMITTER
	1	6-4260	TOTALIZER & BONNET COMPLETE (ITEMS 1 THRU 6)
1	1	7-4260	TOTALIZER & BONNET COMPLETE (ITEMS 1 THRU 8)
	1	5-4316	TOTALIZER BONNET ASSEMBLY
	1	1-4317-2	TOTALIZER BONNET LID (W/PIN)
2	1	1-1551-38	O-RING, TOTALIZER BONNET
3	4	1-1115-10-10B	SCREW, BONNET MOUNTING (ea.)
4	1	5-4260	TOTALIZER ASSEMBLY (SPECIFY DIAL)
	1	3-2310-*	DIAL (AS SPECIFIED)
	2	1-1113-3-3	SCREW, DIAL MOUNTING (ea.)
	1	1-4276	SWEEP HAND
5	1	1-4318	TOTALIZER BASE CUP
6	1	1-1551-17	O-RING, BASE CUP
7	1	3-4045	A-GEAR ASSEMBLY (SPECIFY # OF TEETH)
8	1	3-4045	B-GEAR ASSEMBLY (SPECIFY # OF TEETH)
9	1	3-2324	TOTALIZER DRIVE MAGNET ASSEMBLY
10	1	4-4141-1	TRANSMITTER BASE ASSEMBLY
11	1	2-4141-1	TRANSMITTER BASE
12A	1	5-4165-30	CIRCUIT CARD w/ TRANS. REED SWITCH (SP-DT)
12B	1	5-4165-150	CIRCUIT CARD w/ TRANS. REED SWITCH (SP-ST)
15	2	1-1118-4-4	SCREW, PULSE CARD MOUNTING (ea.)
16	2	1-1302-4	SHAKEPROOF WASHER, PULSE CARD MTG. (ea.)
18	1	5-4142-R	TRANSMITTER GEAR TRAIN ASSEMBLY
19	1	1-4142	TRANSMITTER TOP PLATE
20	3	1-1118-4-4	SCREW, BOTTOM PLATE MOUNTING (ea.)
21	3	1-1302-4	SHAKEPROOF WASHER, BOTTOM PLT. MTG. (ea.)
23	2	1-1118-4-6	SCREW, TRANSMITTER SWITCH MOUNTING (ea.)
24	2	1-1302-4	SHAKEPROOF WASHER, SWITCH MTG. SCREW
25A	1	3-4166-30	TRANSMITTER SWITCH ACTUATOR (30 PPM)
25B	1	3-4166-150	TRANSMITTER SWITCH ACTUATOR (150 PPM)
26	3	1-1118-4-6	SCREW, TOP PLATE MOUNTING (ea.)
27	3	1-1302-4	SHAKEPROOF WASHER, TOP PLATE MTG. SCREW (ea.)
28	1	2-4148	TRANSMITTER SWITCH ACTUATOR SHAFT
29	-	2-4149-R	IDLER SHAFT
30	1	2-4150	DRIVEN CLEVIS SHAFT
31	1	3-4045	TRANSMITTER DRIVE GEAR ASSEMBLY
32	2	1-1303-1	THRUST WASHER
33	1	1-1503-13	THRUST BEARING
34	-	3-4045	TRANSMITTER IDLER GEAR ASSEMBLY (ea.)
35	1	2-4143	TRANSMITTER BOTTOM PLATE
36	1	1-1551-18	O-RING, BOTTOM PLATE
37	1	3-4152	DRIVE CLEVIS
38	1	1-4153	DRIVE CLEVIS COUPLING
39	4	1-1115-10-10	SCREW, TRANSMITTER BASE MOUNTING (ea.)
40	1	1-1551-38	O-RING, TRANSMITTER BASE
41A	1	1-1701-3	OUTPUT CABLE FOR TR01-1-30
41B	1	1-1701-2	OUTPUT CABLE FOR TR01-1-150
42	1	1-1711-5	WATER TIGHT CONNECTOR
-	1	1-1607-5	DESICCANT CAPSULE

* CONSULT FACTORY FOR COMPLETE PART NUMBER

CONSULT FACTORY FOR PRICING.

TOTALIZER-TRANSMITTER

MODELS TR01-1-30 & TR01-1-150



INDICATOR-TOTALIZER-TRANSMITTER

MODELS TR06-1-30 & TR06-1-150

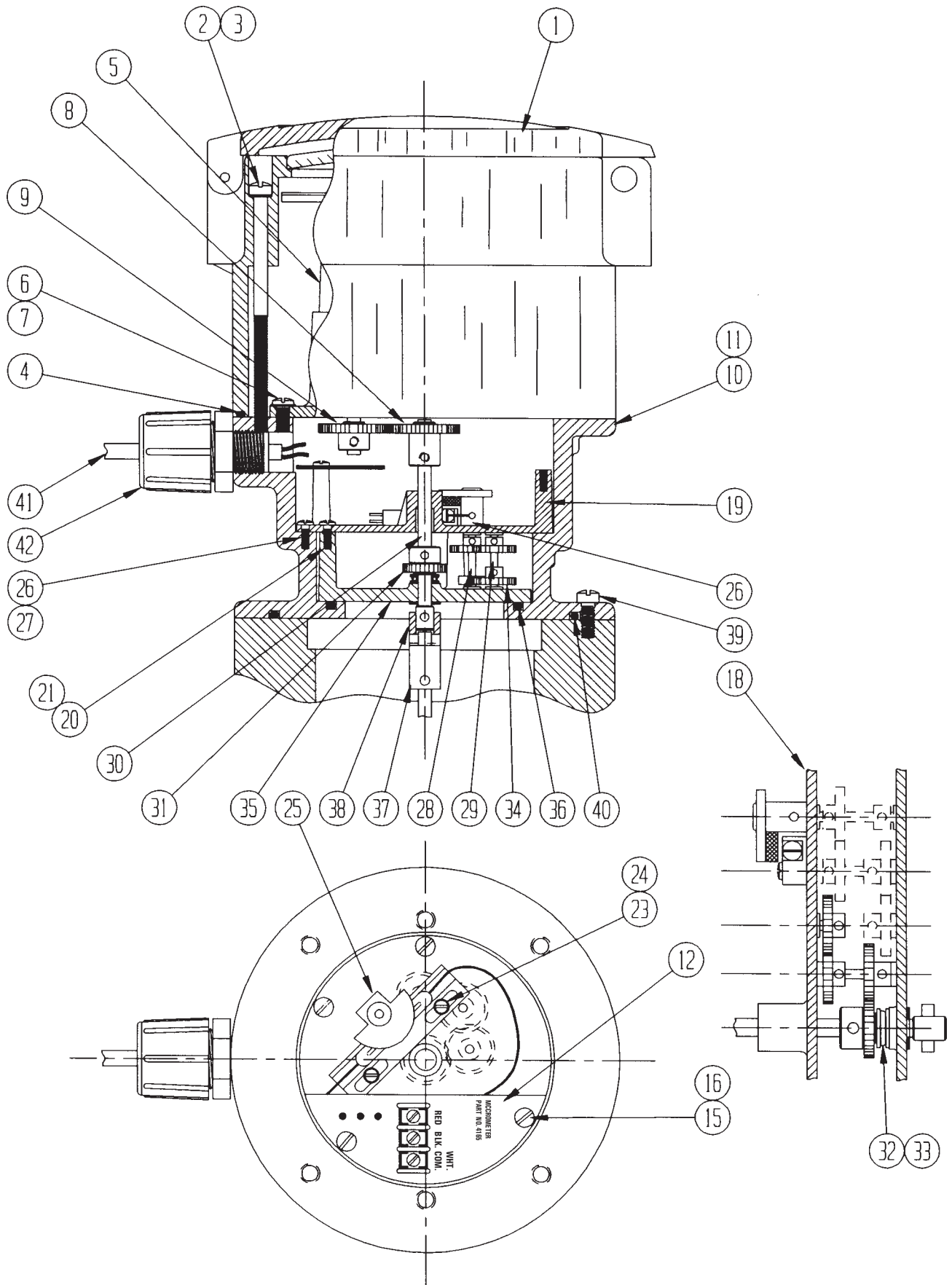
PARTS LIST

NO.	QTY.	PART NUMBER	DESCRIPTION
	-	7-TR06-1-150	MODEL TR06-1-30 INDICATOR-TOTALIZER-TRANSMITTER
	-	7-TR06-1-150	MODEL TR06-1-150 INDICATOR-TOTALIZER TRANSMITTER
1	1	5-4337	INDICATOR-TOTALIZER BONNET ASSEMBLY
2	4	1-1115-10-56H	SCREW, BONNET MOUNTING (ea.)
3	4	1-1551-6	O-RING, BONNET MOUNTING SCREW (ea.)
4	1	1-1551-49	O-RING, BONNET
5	1	5-CN06-2	INDICATOR-TOTALIZER MECHANISM (SPECIFY DIAL)
	1	2-4013	DIAL (AS SPECIFIED)
	2	1-1113-3-3	SCREW, DIAL MOUNTING (ea.)
	1	1-4321	INDICATOR HAND
	1	1-4326	TEST HAND
6	2	1-1113-10-6	SCREW, INDICATOR-TOTALIZER MOUNTING (ea.)
7	2	1-1302-10	SHAKEPROOF WASHER, INDICATOR-TOTALIZER (ea.)
8A	1	3-2176	A-GEAR ASSEMBLY (5-15 TOOTH, SPECIFY # OF TEETH)
8B	1	3-2157	A-GEAR ASSEMBLY (16-54TOOTH, SPECIFY # OF TEETH)
9	1	3-2163	B-GEAR ASSEMBLY (SPECIFY # OF TEETH)
10	1	4-4141-1	TRANSMITTER BASE ASSEMBLY
11	1	2-4141-1	TRANSMITTER BASE
12A	1	5-4165-30	CIRCUIT CARD w/ TRANS. REED SWITCH (SP-DT)
12B	1	5-4165-150	CIRCUIT CARD w/ TRANS. REED SWITCH (SP-ST)
15	2	1-1113-4-4	SCREW, PULSE CARD MOUNTING (ea.)
16	2	1-1302-4	SHAKEPROOF WASHER, PULSE CARD MTG. (ea.)
18	1	5-4142-R	TRANSMITTER GEAR TRAIN ASSEMBLY
19	1	1-4142	TRANSMITTER TOP PLATE
20	3	1-1113-4-4	SCREW, BOTTOM PLATE MOUNTING (ea.)
21	3	1-1302-4	SHAKEPROOF WASHER, BOTTOM PLT. MTG. (ea.)
23	2	1-1113-4-6	SCREW, TRANSMITTER SWITCH MOUNTING (ea.)
24	2	1-1302-4	SHAKEPROOF WASHER, SWITCH MTG. SCREW
25A	1	3-4166-30	TRANSMITTER SWITCH ACTUATOR (30 PPM)
25A	1	3-4166-150	TRANSMITTER SWITCH ACTUATOR (150 PPM)
26	3	1-1113-4-6	SCREW, TOP PLATE MOUNTING (ea.)
27	3	1-1302-4	SHAKEPROOF WASHER, TOP PLATE MTG. SCREW (ea.)
28	1	2-4148	TRANSMITTER SWITCH ACTUATOR SHAFT
29	-	2-4149-R	IDLER SHAFT
30	1	2-4150	DRIVEN CLEVIS SHAFT
31	1	3-4045	TRANSMITTER DRIVE GEAR ASSEMBLY
32	2	1-1303-1	THRUST WASHER (ea.)
33	1	1-1503-13	THRUST BEARING
34	-	3-4045	TRANSMITTER IDLER GEAR ASSEMBLY (ea.)
35	1	2-4143	TRANSMITTER BOTTOM PLATE
36	1	1-1551-18	O-RING, BOTTOM PLATE
37	1	3-4152	DRIVE CLEVIS
38	1	1-4153	DRIVE CLEVIS COUPLING
39	4	1-1115-10-10B	SCREW, TRANSMITTER BASE MOUNTING (ea.)
40	1	1-1551-38	O-RING, TRANSMITTER BASE
41A	1	1-1701-3	OUTPUT CABLE FOR TR06-1-30
41B	1	1-1701-2	OUTPUT CABLE FOR TR06-1-150
42	1	1-1711-5	WATER TIGHT CONNECTOR
-	1	1-1607-6	DESICCANT BAG

CONSULT FACTORY FOR PRICING.

INDICATOR-TOTALIZER-TRANSMITTER

MODELS TR06-1-30 & TR06-1-150





SERIAL NUMBER

REPAIR RECORD

PURCHASE DATE

SPECIFICATIONS		INDEX
METER SIZE & MODEL NO.		
REGISTRATION		
INDICATOR DIAL GEARING		

ODOMETER READING

CHANGE GEARS
A/B
RATIO

NOTES: _____

DATE	REPAIR	METER LOCATION	COMMENTS