



Document Number	Issue Date	Rev. Date
DPL80354	07/64	1/29/18

Dimensional Drawings for TML Split Shaft PTO

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P.T.O. Dimensions		3
Output Shaft Details	Single Shafts & Double Shaft	4
Optional Parking Brake		5
Optional Electric Shift	Mounting on P.T.O.	6
	Wiring and Panel Plates	7
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Optional Driveline Companion Flanges		
Mechanical Tachometer and Speedometer Connection		

TABLE 1-AVAILABLE MODELS			
OUTPUT SHAFT			MODEL
TYPE	REAR (LOCATION 1)	FRONT (LOCATION 2)	
SINGLE	1350 SERIES END YOKE	---	TML-1CA
	---	1350 SERIES END YOKE	TML-2CA
DOUBLE	1350 SERIES END YOKE	1350 SERIES END YOKE	TML-1CA2CA

TABLE 2-AVAILABLE DRIVELINES										
TYPE	SIZE	SPLINE	DIM. A	SELF LOCKING NUT TORQUE VALUE	PARKING BRAKE (SEE DETAIL B ON PAGE 5)				SEE DETAIL D ON PAGE 8	
					9 X 3		12 X 3		TACHOMETER	SPEEDOMETER
					COMPLETE	LINKAGE ONLY	COMPLETE	LINKAGE ONLY		
HEAVY DUTY	1.75 INCH	1.750-10 SAE	$\frac{3.000}{76.20}$	400-450 LB-FT	N/A	X	N/A	X	X	X
EXTRA HEAVY DUTY	2 INCH	2.000-10 SAE	$\frac{3.750}{95.25}$	475-525 LB-FT	N/A	X	X	X	X	N/A
		2.000-38T INVOLUTE	$\frac{2.875}{73.02}$	475-525 LB-FT	N/A	X	X	X	X	N/A

NOTE:

1. PARKING BRAKE AND SPEEDOMETER CONNECTIONS ARE NOT AVAILABLE ON CERTAIN TML MODELS. SEE DATA SHEET DS-3000 FOR DETAILS.

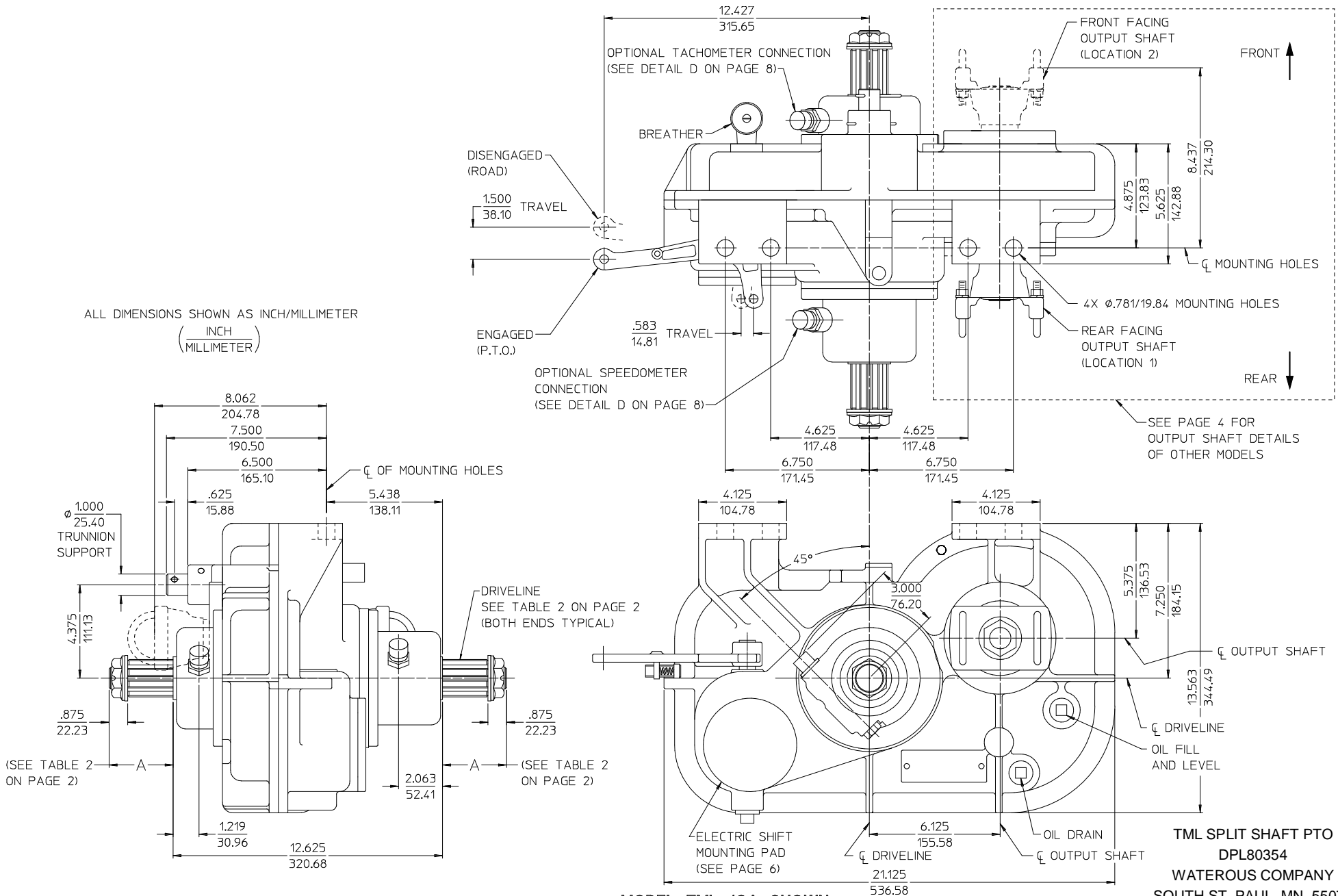
ORDERING INFORMATION:
SPECIFY THE FOLLOWING:

1. TML MODEL FROM TABLE 1.
2. ASSEMBLY NUMBER 80354.
3. RATIO FROM TABLE 3.
4. DRIVELINE SIZE/SPLINE FROM TABLE 2.
5. OPTIONS: TACHOMETER, SPEEDOMETER, PARKING BRAKE, ELECTRIC SHIFT, COMPANION FLANGES.

TABLE 3-AVAILABLE RATIOS	
0.71, 0.88, 1.04, 1.29, 1.59	
RATIO = $\frac{P.T.O \text{ RPM}}{\text{ENGINE RPM}}$	

ALL DIMENSIONS SHOWN AS INCH/MILLIMETER

$\left(\frac{\text{INCH}}{\text{MILLIMETER}} \right)$



ALL DIMENSIONS SHOWN AS INCH/MILLIMETER
 (INCH / MILLIMETER)

(SEE TABLE 2 ON PAGE 2)

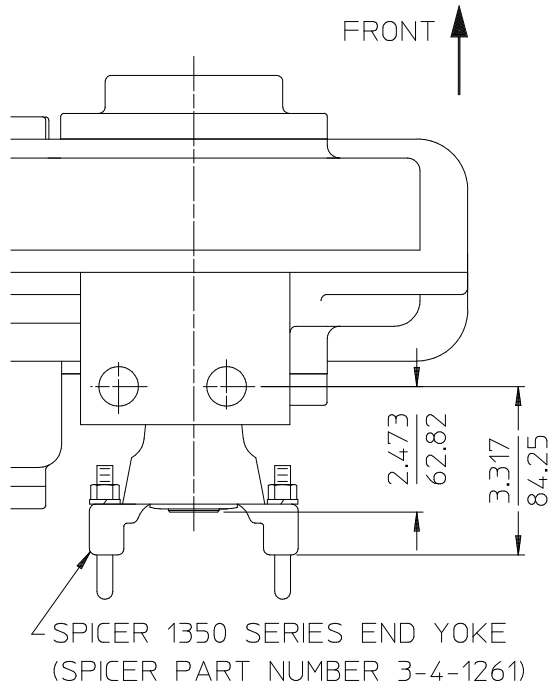
DRIVELINE
 SEE TABLE 2 ON PAGE 2
 (BOTH ENDS TYPICAL)

(SEE TABLE 2 ON PAGE 2)

MODEL TML-1CA SHOWN

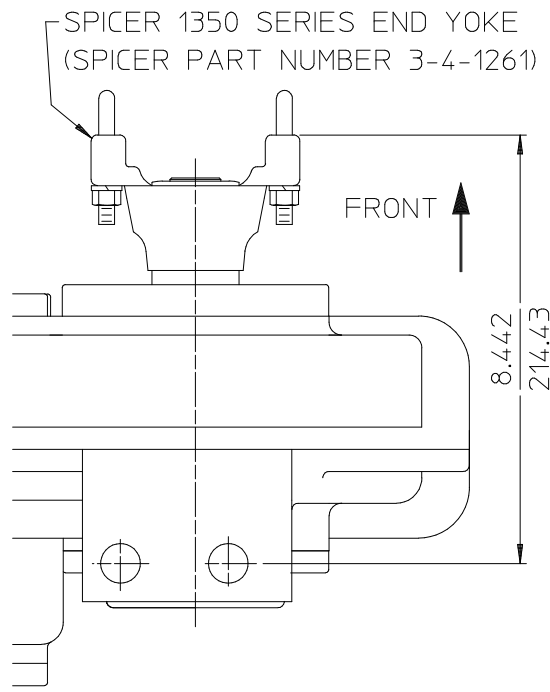
SEE PAGE 4 FOR OUTPUT CONFIGURATIONS OF OTHER MODELS

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SOUTH ST. PAUL, MN 55075
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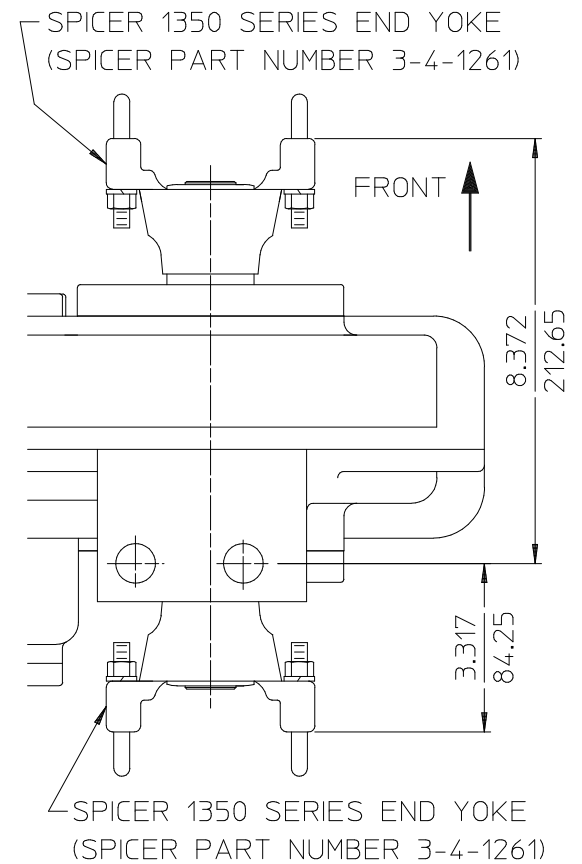


TML-1CA

SINGLE OUTPUT SHAFT DETAILS



TML-2CA



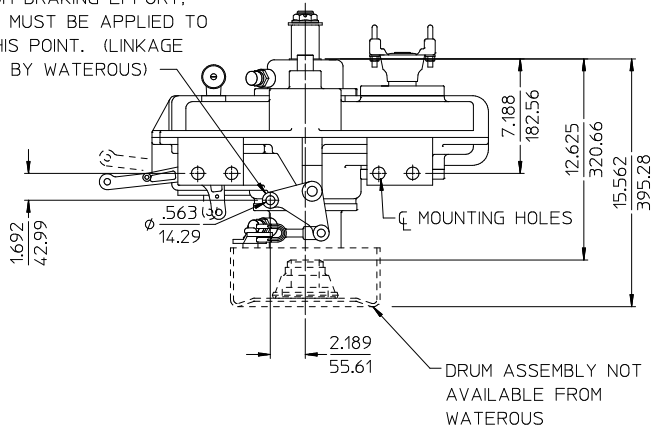
TML-1CA2CA

DOUBLE OUTPUT SHAFT DETAIL

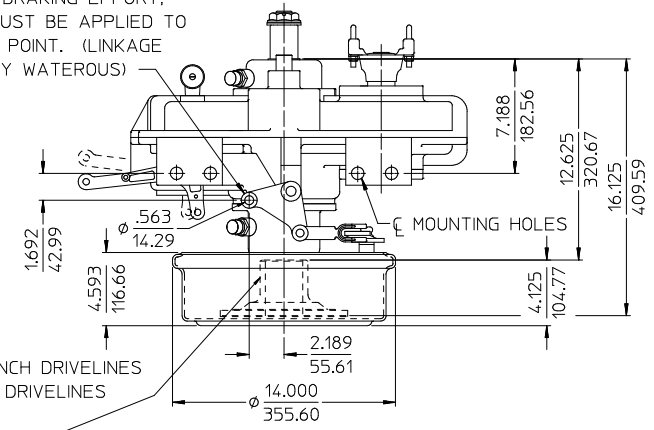
ALL DIMENSIONS SHOWN AS INCH/MILLIMETER
 ($\frac{\text{INCH}}{\text{MILLIMETER}}$)

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TO ACHIEVE MAXIMUM BRAKING EFFORT,
A FORCE OF 900# MUST BE APPLIED TO
BELLCRANK AT THIS POINT. (LINKAGE
IS NOT FURNISHED BY WATEROUS)



TO ACHIEVE MAXIMUM BRAKING EFFORT,
A FORCE OF 900# MUST BE APPLIED TO
BELLCRANK AT THIS POINT. (LINKAGE
IS NOT FURNISHED BY WATEROUS)

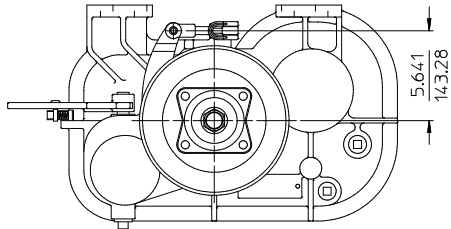


COMPANION FLANGE,
1600 SERIES FOR 1-3/4 INCH DRIVELINES
1700 SERIES FOR 2 INCH DRIVELINES
FURNISHED WITH BRAKE
(SEE DETAIL C ON PAGE 8)

DRUM ASSEMBLY FOR 1600 SERIES
FOR 1-3/4 IN. DRIVELINE IS NOT
AVAILABLE FROM WATEROUS

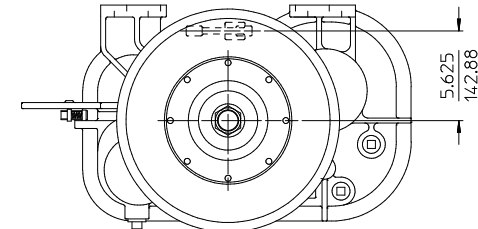
ALL DIMENSIONS SHOWN AS INCH/MILLIMETER

($\frac{\text{INCH}}{\text{MILLIMETER}}$)



9X3

1-3/4 IN DRIVELINE ONLY
LINKAGE ONLY AVAILABLE



12X3

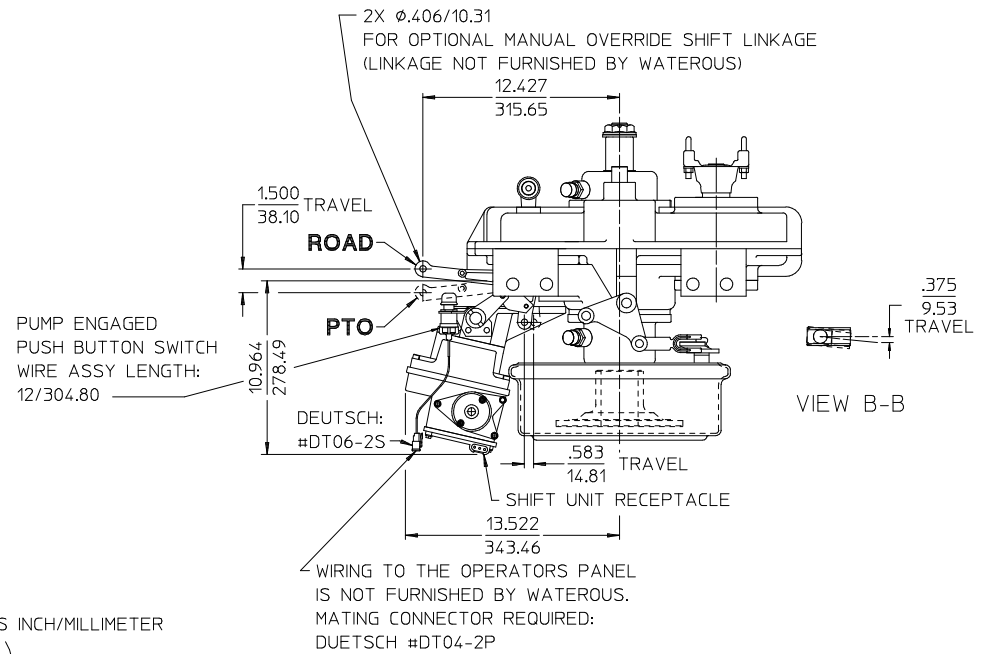
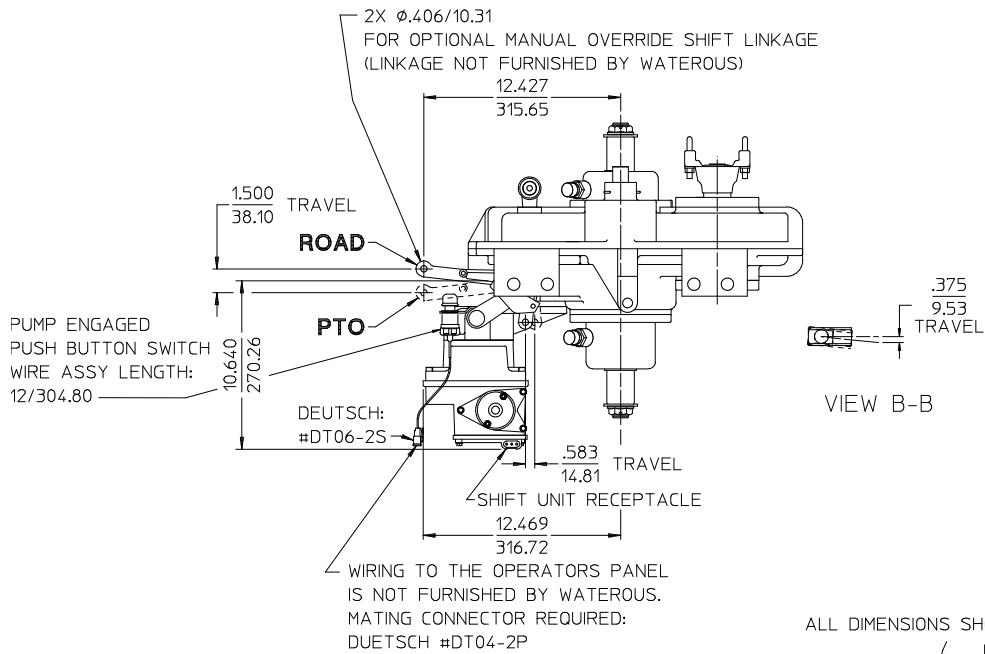
2 IN. DRIVELINE
COMPLETE BRAKE OR LINKAGE
ONLY AVAILABLE

1-3/4 IN. DRIVELINE ONLY
LINKAGE ONLY AVAILABLE.

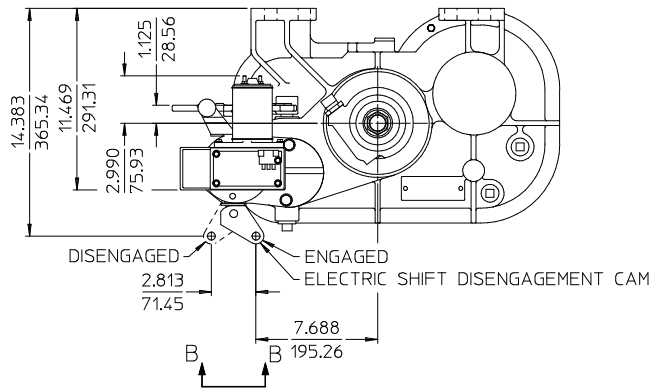
OPTIONAL BENDIX DUO-DUTY PARKING BRAKES

DETAIL B

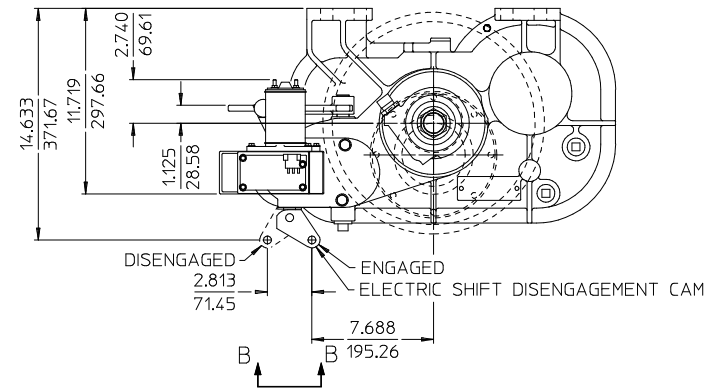
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ALL DIMENSIONS SHOWN AS INCH/MILLIMETER
(INCH / MILLIMETER)



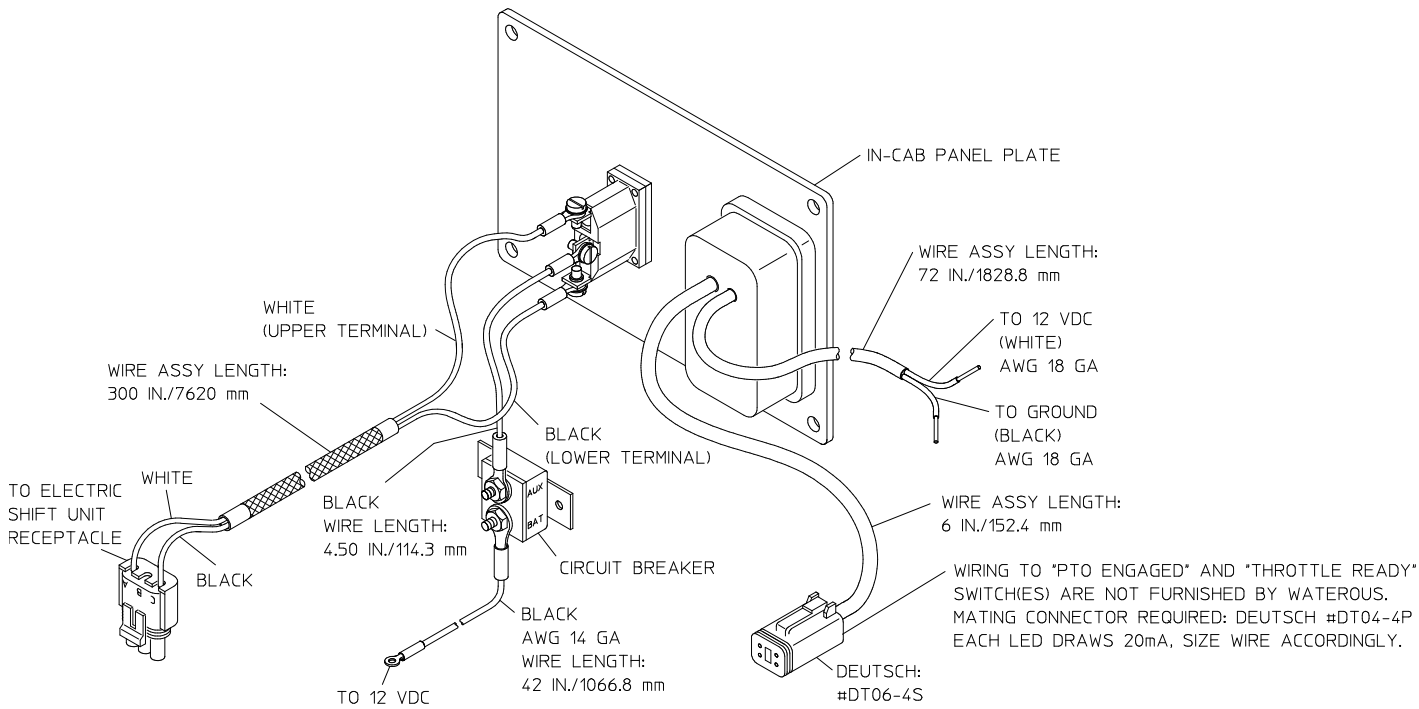
**CONFIGURATION WITH NO PARKING BRAKE
OR WITH 9X3 PARKING BRAKE**



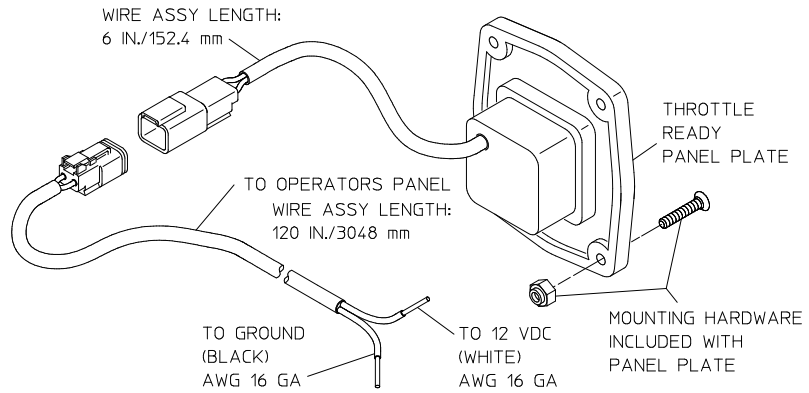
CONFIGURATION WITH 12X3 PARKING BRAKE

**OPTIONAL ELECTRIC SHIFT UNIT
DETAIL E**

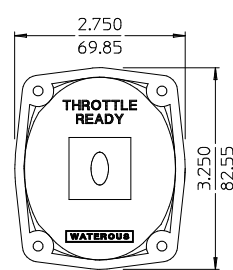
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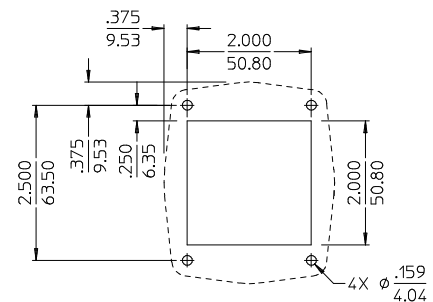
ELECTRIC SHIFT PANEL PLATE WIRING
NON-FIRE PUMP APPLICATION
(SEE PAGE 8 FOR WIRING SCHEMATIC)



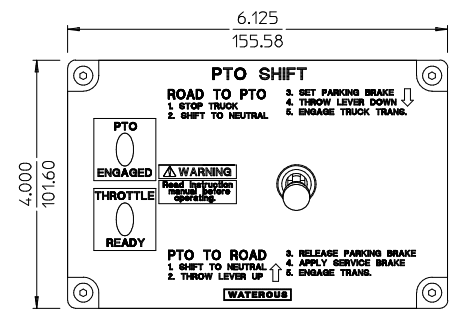
OPERATORS PANEL PLATE WIRING



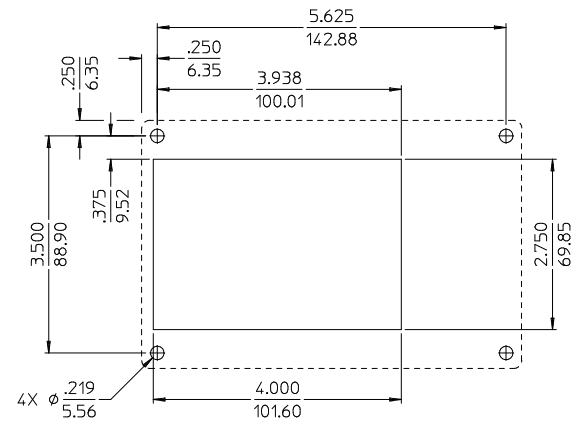
OPERATORS PANEL PLATE



OPERATORS PANEL PLATE HOLE LAYOUT



IN-CAB SWITCH PANEL PLATE



SWITCH PANEL PLATE HOLE LAYOUT

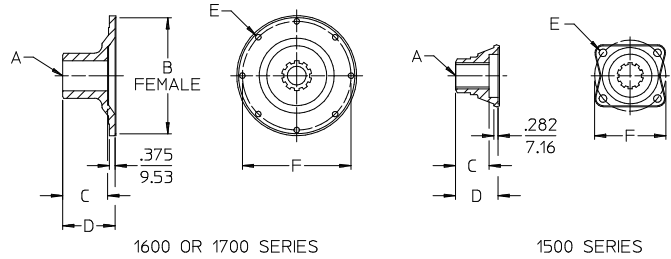
ALL DIMENSIONS SHOWN AS INCH/MILLIMETER
(INCH / MILLIMETER)

ELECTRIC SHIFT LED WIRING AND PANEL PLATE

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SERIES	A	B	C	D	E	F	PART NO.
	SPLINE	PILOT DIAMETER			NUMBER OF BOLTS	BOLT CIRCLE	
1500	1.750-10	3.750/95.25	2.250/57.15	2.938/74.63	(4) .500/12.70	4.750/120.65	61319
1600	1.750-10	6.625/168.27	2.250/57.15	3.500/88.90	(8) .375/9.53	6.125/155.58	61320
1700	2.000-10	7.750/196.85	3.000/76.20	3.500/88.90	(8) .375/9.53	7.250/184.15	61321
1700	2.000-38T	---	---	---	(8) .375/9.53	7.250/184.15	SEE NOTE

NOTE: COMPANION FLANGE FOR 2.000-38T SHOWN FOR REFERENCE ONLY. THIS FLANGE IS PART OF THE PARKING BRAKE ASSEMBLY.

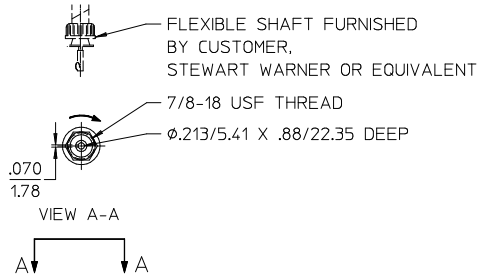


OPTIONAL COMPANION FLANGE DETAILS

DETAIL C

ALL DIMENSIONS SHOWN AS INCH/MILLIMETER

($\frac{\text{INCH}}{\text{MILLIMETER}}$)

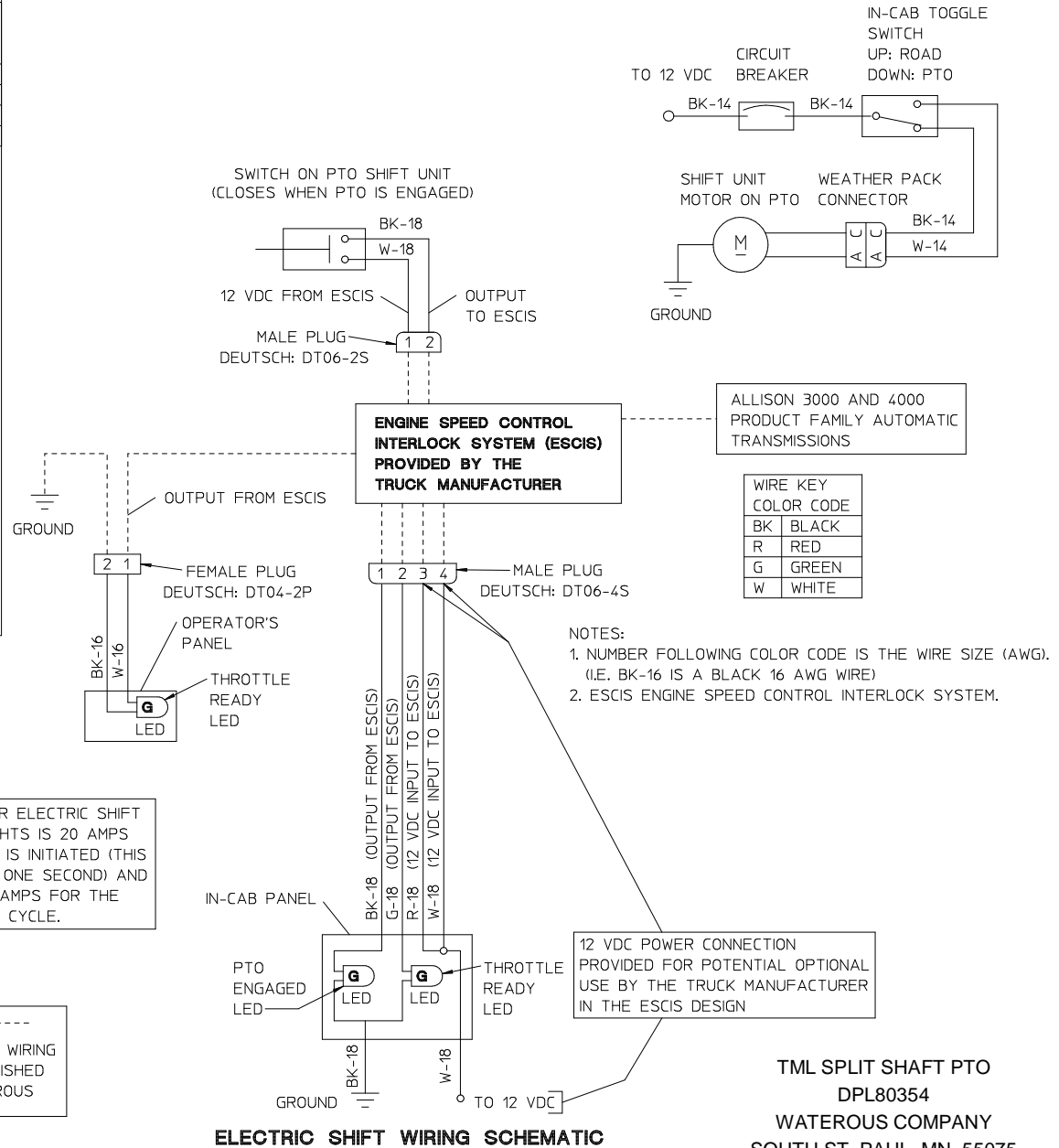


MECHANICAL DRIVE TACHOMETER AND SPEEDOMETER CONNECTION DETAIL

DETAIL D

CURRENT DRAW FOR ELECTRIC SHIFT WITH INDICATOR LIGHTS IS 20 AMPS WHEN SHIFT CYCLE IS INITIATED (THIS IS APPROXIMATELY ONE SECOND) AND DECREASES TO 10 AMPS FOR THE REMAINDER OF THE CYCLE.

INDICATES WIRING NOT FURNISHED BY WATEROUS



ELECTRIC SHIFT WIRING SCHEMATIC

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WIRE KEY	COLOR CODE
BK	BLACK
R	RED
G	GREEN
W	WHITE

- NOTES:
1. NUMBER FOLLOWING COLOR CODE IS THE WIRE SIZE (AWG). (I.E. BK-16 IS A BLACK 16 AWG WIRE)
 2. ESCIS ENGINE SPEED CONTROL INTERLOCK SYSTEM.