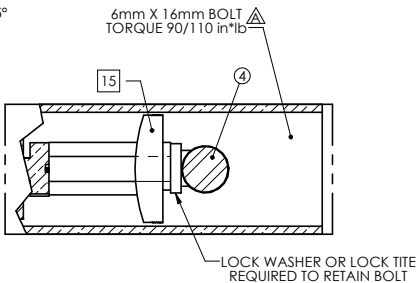**3D GEOM:** 419474
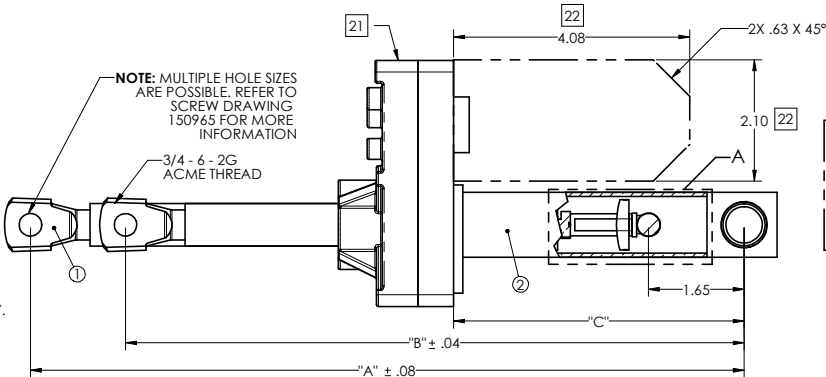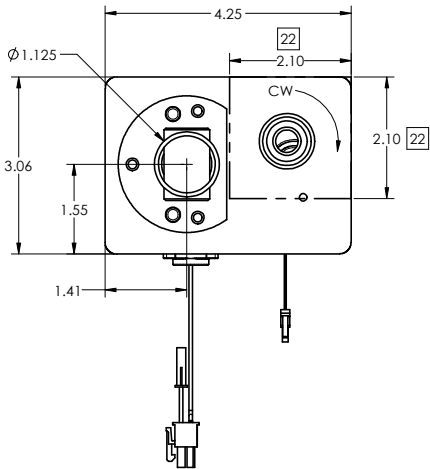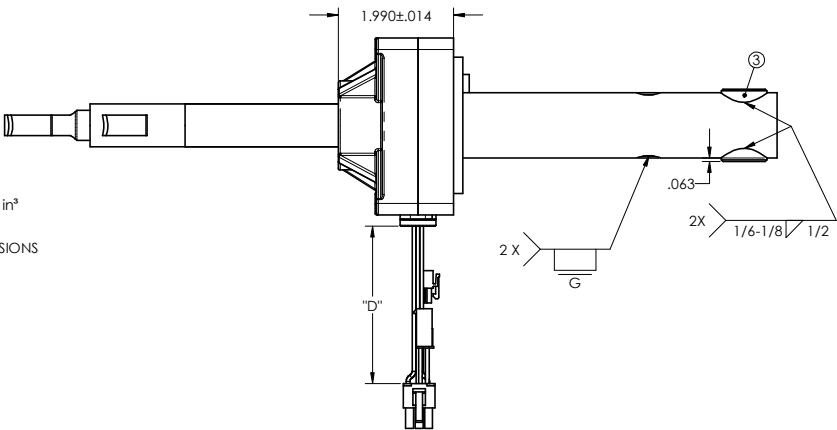
NOTES:

1. RATED VOLTAGE: 36 VDC
2. EXTENDING AVERAGE SPEED WITH 400 lbs LOAD: 4.5 s/in ±20%.
   RETRACTING AVERAGE SPEED WITH 400 lbs LOAD: 4.5 s/in ±20%.
3. 88% DUTY CYCLE: 350 lb MAX AIR-COOLED (SEE DWG ZE0248).
4. 72% DUTY CYCLE: 450 lb MAX
5. 50% DUTY CYCLE: 750 lb MAX
6. GEAR SPEC: 36:1 GEAR RATIO.
7. RMS CURRENT: 3.3 A MAX, STALL CURRENT: 6.0 A MAX
8. MINIMUM EXTENSION/RETRACTION FORCE: 750 lb
9. MINIMUM RETRACTING/EXTENSION FORCE: 900 lb
10. MINIMUM BRAKING CAPACITY: 900 lb
11. PART NUMBER MUST BE CLEARLY MARKED ON MOTOR.
12. THIS MOTOR HAS THRUST BEARINGS LOCATED
    ON BOTH SIDES OF DRIVE GEAR.
13. CLASS B INSULATION REQUIRED.
14. MOTOR WIRE TO 2-PIN RECEPTACLE: 18 AWG. RATED AT 105°C, 300 V.
    UL AND CSA APPROVED. LENGTH = RECEPTACLE + WIRE.
    3.0" < LENGTH < 9.0"
15. WASHER ASSEMBLED AS SHOWN WITH CURVED
    SIDE TOWARD GEAR HOUSING.
16. QUADRATURE SENSOR WIRE: 22 AWG. RATED AT 105°C, 300 V. UL AND CSA
    APPROVED.
17. 6-PIN RECEPTACLE TO 2-PIN PLUG: 18 AWG. RATED AT 105°C, 300 V. UL AND
    CSA APPROVED. LENGTH = PLUG + WIRE.
    3.0" < LENGTH < 9.0"
18. QUADRATURE SPEC: 432 COUNTS/in.
    RING MAGNET: 72 POLES, ~172 G/POLE
19. 0.025 MAX END PLAY WITH 50 lb LOAD, MEASURED BETWEEN
    MOUNTING HOLES AT APPROXIMATELY MID-STROKE
    WITH COMPRESSION AND TENSION.
20. **LIFT MOTOR ASSEMBLY ON IQC TEST FIXTURE, TEST CRITERIA:**
    NOISE MEASURED WITH 411 lbs LOAD, AT 36in AWAY, AND A
    40 dB AMBIENT NOISE WIEGHTED A: EXTENDED AND RETRACTED
    MUST MEASURE LESS THAN 55 dB WEIGHTED A.
21. HIGH PRESSURE GREASE REQUIRED (COASTAL PREMIUM MOLY EP
    OR EQUIVALENT WITH ICON APPROVAL) MINIMUM QTY REQUIRED: 2.0 in³
    PACKED IN GEAR BOX, SCREW AND ACME NUT.
22. INDICATES MOTOR SIZE LIMITATIONS, MUST NOT EXCEED STATED DIMENSIONS
23. THIS MOTOR INCLUDES INTEGRATED STOP BRACKET PARTS
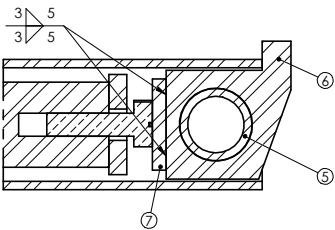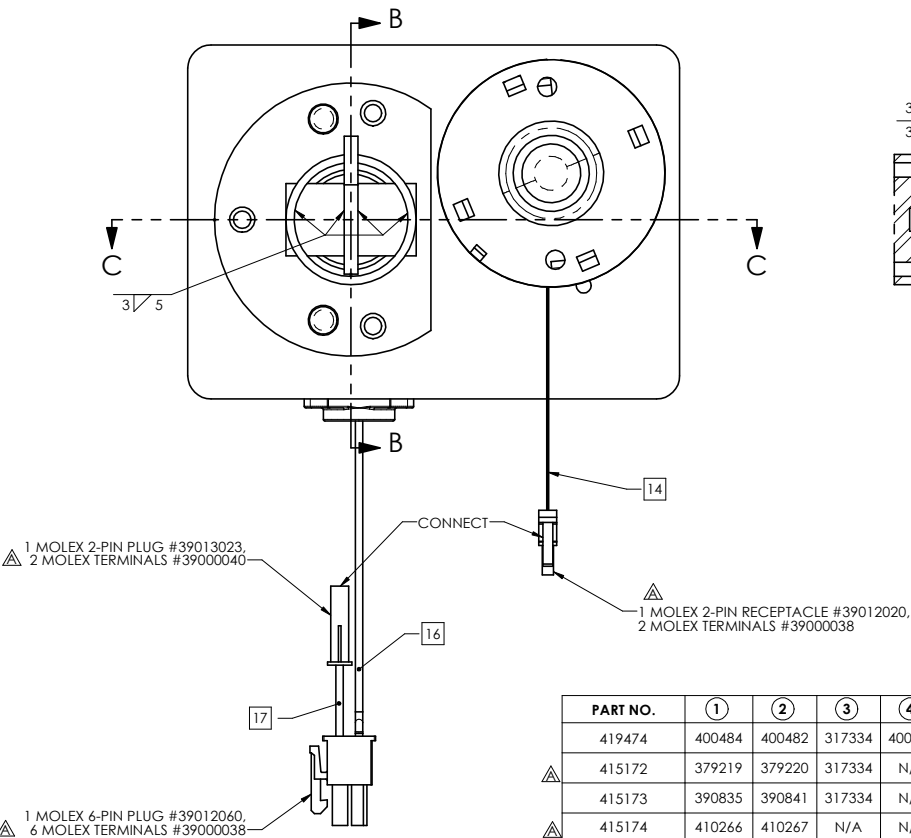   AS INDICATED IN TABLE AND ON SECTION B-B

REVISIONS
DRAWINGS PREVIOUS TO LAST REVISION DATE ARE OBSOLETE

	DESCRIPTION OF CHANGE	
A11919-04	NOTE CHANGES;ADD PG 3	12/16/19
A20920-069	UPDT NOTES	3/8/20

NOTE: MULTIPLE HOLE SIZES
ARE POSSIBLE. REFER TO
SCREW DRAWING
150965 FOR MORE
INFORMATION

3/4 - 6 - 2G
ACME THREAD

22 4.08
21
2X .63 X 45°
2.10 22
"B" ± .04
"A" ± .08
"C"
1.65
A

6mm X 16mm BOLT
TORQUE 90/110 in*lb
15 4
LOCK WASHER OR LOCK TITE
REQUIRED TO RETAIN BOLT

DETAIL A
SCALE 2 : 1

1.990±.014
3
.063
2X 1/6-1/8 1/2
2 X
G
"D"

4.25
22
2.10
Ø1.125
CW
3.06
2.10 22
1.55
1.41

RELEASE APPROVALS		DATE	PRODUCTS	TOLERANCES	TITLE: MTR,DC,LIFT,PUSH/PULL,W/MOLEX
DRAWN BY	R.SKAPPLE	9/25/19	X AEROBIC	METRIC .X ± .08 .XX ± .25	
CHECKED BY		10/1/19	__ ANAEROBIC		BASE PRODUCT: MULTIPLE
ENG. APP.	E.TINNEY	10/1/19	__ TREADMILLS	ENGL .XX ± .03 .XXX ± .010	SCALE: 1:1
MANUF. APP.		10/1/19	__ OTHER	ANGLES ±	SHEET: 1 OF 3

ICON

D

3D GEOM: 419474

23 **INTEGRATED STOP BRACKET**

SECTION B-B
SCALE 2 : 1

SECTION C-C
SCALE 2 : 1

FLUSH

90°

B

C

C

B

CONNECT

△ 1 MOLEX 2-PIN PLUG #39013023,
2 MOLEX TERMINALS #39000040

△ 1 MOLEX 2-PIN RECEPTACLE #39012020,
2 MOLEX TERMINALS #39000038

△ 1 MOLEX 6-PIN PLUG #39012060,
6 MOLEX TERMINALS #39000038
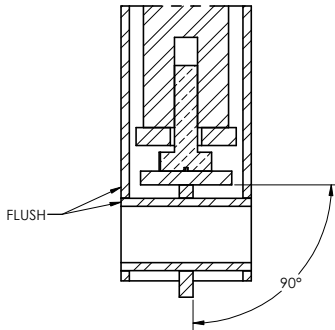
PART NO.	①	②	③	④	⑤	⑥	⑦	EXTENDED "A"	RETRACTED "B"	LENGTH "C"	LENGTH "D"	STROKE	NOTES
419474	400484	400482	317334	400483	N/A	N/A	N/A	15.00	12.52	5.02	6.0	2.48	4 6 8 12
415172	379219	379220	317334	N/A	N/A	N/A	N/A	9.58	6.73	3.61	6.0	2.85	4 6 8 12
415173	390835	390841	317334	N/A	N/A	N/A	N/A	17.15	12.90 △	5.02	6.0	4.25	4 6 8 12
415174	410266	410267	N/A	N/A	410268	410269	379949	17.86	10.85	7.93	6.0	7.01	5 6 9 12 23
415904	416076	390841	317334	N/A	N/A	N/A	N/A	13.12	8.90 △	5.02	6.0	4.22	4 6 8 12
423419	318979	303583	N/A	N/A	N/A	N/A	N/A	16.28	9.93	7.48	6.0	6.35	5 6 9 12

3D GEOM: 419474
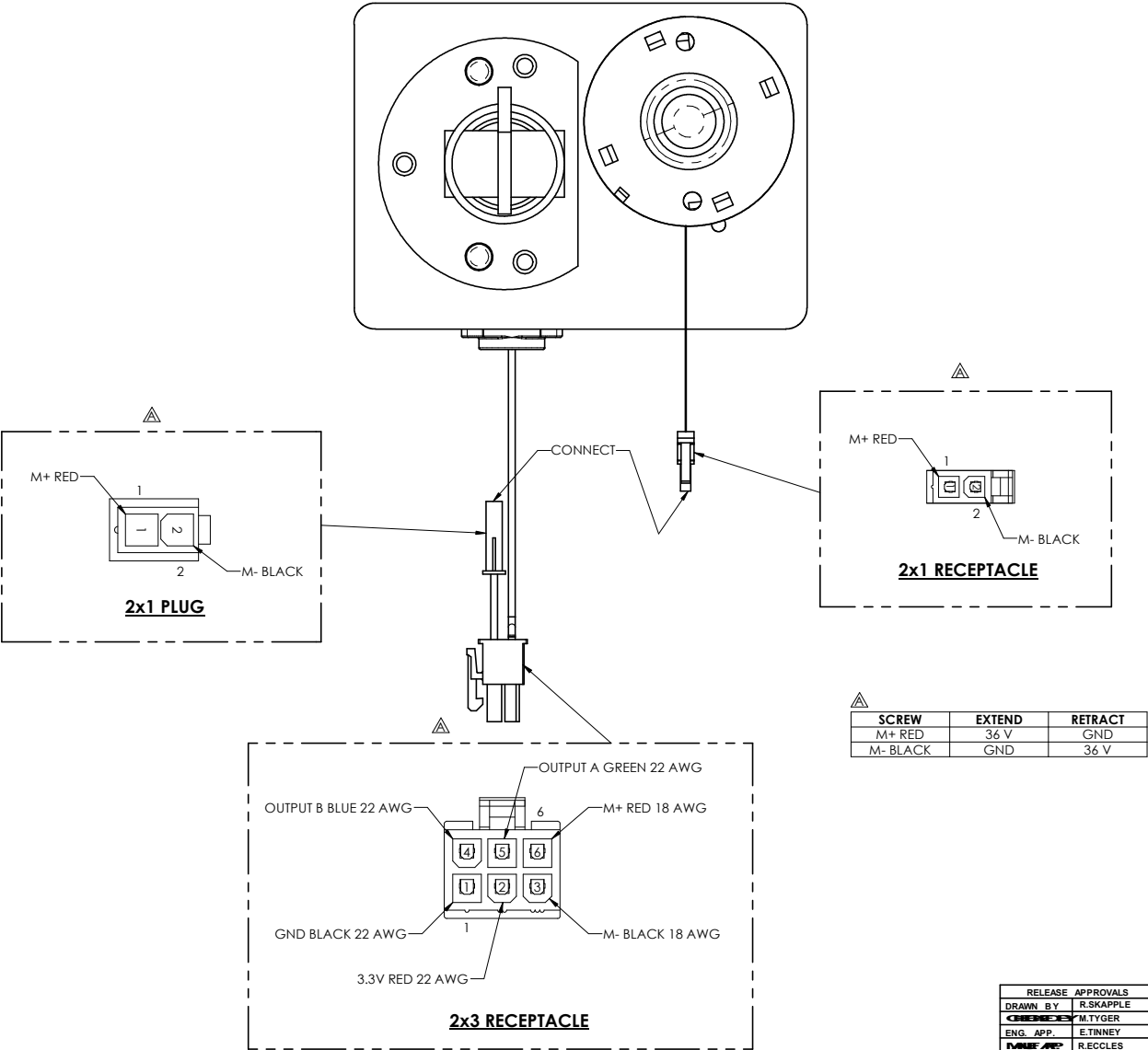
CONNECT

M+ RED
1
2
M- BLACK

2x1 PLUG

M+ RED
1
2
M- BLACK

2x1 RECEPTACLE

SCREW	EXTEND	RETRACT
M+ RED	36 V	GND
M- BLACK	GND	36 V

OUTPUT A GREEN 22 AWG
OUTPUT B BLUE 22 AWG
M+ RED 18 AWG
6
4 5 6
1 2 3
1
GND BLACK 22 AWG
M- BLACK 18 AWG
3.3V RED 22 AWG

2x3 RECEPTACLE

RELEASE APPROVALS		DATE	PRODUCTS		TOLERANCES		TITLE: MTR,DC,LIFT,PUSH/PULL,W/MOLEX
DRAWN BY	R.SKAPPLE	9/25/19	_X_	AEROBIC	METRIC .X ± .08		
CHECKED	M.TYGER	10/1/19		ANAEROBIC	.XX ± 0.250.25	BASE PRODUCT: MULTIPLE	
ENG. APP.	E.TINNEY	10/1/19		TREADMILLS	ENGL .XX ± 0.03 .XXX± 0.010	SCALE: 1:1	
MNFG APP	R.ECCLES	10/1/19		OTHER	ANGLES ±	SHEET: 3 OF 3	

ICON

D