CLUTCH Pro M - Version 3.0 - (Untitled)

Racing Systems Analysis - www.QUARTERjr.com

General Data

Altimeter - feet	1200
Temperature - deg F	75
Relative Humidity - %	60
Low Gear Ratio	2.54
Final Drive Ratio	3.75
Tire Diameter - inches	26.0

Clutch Arm Data

Mfg.Style Code	BND.1
Number of Arms	3
Total Counter Wt - grams	30.0
Counter Wt/Arm - grams	10.0
Ring Height - inches	0.100

Racetrack Data

Estimated 60 ft Time - sec	1.17
Maximum Acceleration - g's	2.20
Traction Index	3

Clutch Spring and Disk Data

Static Plate Force - lbs	190
Number of Disks	9
Total Disk Weight - lbs	7.6
Outer Disk Diameter - inches	6.00
Inner Disk Diameter - inches	4.15
Effective Friction Area - %	100.0
Friction Coefficient	0.230

Polar Moments of Inertia

Engine + Flywheel + Clutch	0.88
Transmission + Driveshaft	0.010
Tires + Wheels + Ring Gear	8.6

Engine Dyno Data

RPM	HP	Torque
4000	152	200
4500	180	210
5000	205	215
5500	230	220
6000	246	215
6500	254	205
7000	260	195
7500	257	180
8000	244	160
8500	210	130

Gasoline Carburetor
HP/Torque Mult 1.000

Clutch Plate Force - lbs

RPM	Centrif	Total
4000	98	288
4500	124	314
5000	152	342
5500	184	374
6000	218	408
6500	256	446
7000	298	488
7500	342	532
8000	388	578
8500	438	628

Clutch Forces @ Lockup

Calculated ---	Low Gear	High Gear
Lockup RPM	4800	5460
Plate Force - lbs	330	370
Friction PSI	1.2	1.4

Polar Moment of Inertia Worksheet

Crankshaft Weight - lbs	20.0
Crankshaft Stroke - inches	4.500
Flywheel + Clutch Weight - lbs	18.0
Flywheel Diameter - inches	6.00
Polar Moment of Inertia =	0.88

Static Plate Force Worksheet

Number of Springs	-1-	6
Spring Base Pressure - lbs	30.0	180
Spring Rate - lbs/inch	30.0	180
Shim Thickness - inches		0.050
Delta Ring Height - inches		0.000
Static Plate Force - lbs =		190

Polar Moment of Inertia Worksheet

Transmission Type: Manual Gears, Shafts	
Transmission Weight - lbs	22.0
Case Diameter - inches	4.0
Polar Moment of Inertia =	0.010

Motorcycle Final Drive Ratio Worksheet

Primary Drive Speed Reduction	1.62
High Gear Ratio	1.00
Countershaft Sprocket Teeth	19
Rear Wheel Sprocket Teeth	44
Final Drive Ratio =	3.75

Polar Moment of Inertia Worksheet

Tire Weight - lbs	18.0
Tire Diameter - inches	26.0
Wheel Weight - lbs	12.0
Wheel Diameter - inches	15.0
Polar Moment of Inertia =	8.6

Effective Friction Area Worksheet

Number of Slots	0
Slot Width - inches	0.000
Number of Holes	0
Hole Diameter - inches	0.000
Effective Area - % =	100.0