



Overall Gear Ratio: 12.76:1
 All gears are 20 dp, 14.5 degree pressure angle, 4140 steel
CIM Gear: 14 teeth
Large Cluster Gear: 50 teeth (3/8" hex bore)
Small Cluster Gear: 14 teeth (3/8" hex bore)
Large Output Gear: 50 teeth (1/2" hex bore)
Output Shaft: 1/2" diameter, 1/8" keyway, 4140 steel

NEW for 2009:
 1. 2 CIM gears per Toughbox (w/ associated hardware)
 2. Output shaft and Mount Plate allow for encoder mounting
 3. Many more optional parts available

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

DRAWN	Andy Baker	12/03/08	ANDYMARK.BIZ STANDARD SOLUTIONS FOR COMPETITION ROBOTS	
MATERIAL				
QUANTITY	1		TITLE 2009 Toughbox	
HEAT TREAT				
FINISH			SIZE A3 DWG NO Toughbox_asm REV 1	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ANGLES ±0.5° 2 PL ±0.01" 3 PL ±0.005"			FILE NAME: Toughbox_asm.dft	
			SCALE:	WEIGHT: SHEET 1 OF 1