Engineering Change

	Part/Drawing Name/No.	Revision No.	Part Description	ECN No.
Original	EML2322L-020	A	Wheel hub for Denso 150 rpm gearmotor	1
Changed	EML2322L-020	B	Wheel hub for Entstort 44 rpm gearmotor	4B

Reason for Change

After testing the robot, our group realized the Denso 150 rpm right angle motors coupled to 13.5" diameter wheels produce a robot that is too fast to control, given our ball manipulator design. Consequently, we decided to change the hub design so it is compatible with the 44 rpm Entstort motor shaft.

Description of Change

Since the 44 rpm Entstort motor shaft possesses splines, we are modifying the hub design shown in **Revision A** to engage these splines; this is accomplished by drilling a ϕ0.394" (10mm) stepped bore into the motor-side of the hub, as shown in **Revision B**. The threaded portion of the motor shaft passes through the center hole which measures ϕ0.315" (or 8 mm) and a ϕ0.75" counterbore is added on the wheel-side of the hub to allow a nut to be inserted onto the threaded motor shaft and tightened with a socket.

Affected Documents & Parts

- ☐ Purchase Order (s)
- ☒ Assembly Drawing (s)
- ☐ Bill Of Materials (BOM)
- ☐ Other Parts (List Names):

Originator Name (#)	Signature	Date
James Keith	James Keith	6/22/11

Approval

Requirements

Is the ECN filled out completely?	☒ Yes	☐ No
Is the Original Drawing attached?	☒ Yes	☐ No
Is the Updated Drawing attached?	☒ Yes	☐ No
Is the Due Date understood by the team?	☒ Yes	☐ No

Due Date: 6/29/11

Execution

- ☒ A – Modify Existing Part
- ☒ B – Create New Part
- ☐ C – Scrap Existing Part (If Manufacturing already commenced)
- ☒ B – Delete Existing Part (If Manufacturing hasn't commenced)

Group Member Name (#2)	Signature	Date
Adam Glintz	Adam Glintz	6/27/11
Group Member Name (#3)	Signature	Date
Jeff Koch	Jeff Koch	6/27/11
Group Member Name (#4)	Signature	Date
Josh Gordon	Josh Gordon	6/28/11
TA Name	Signature	Date
Bill Hollon	Bill Hollon	6/29/11